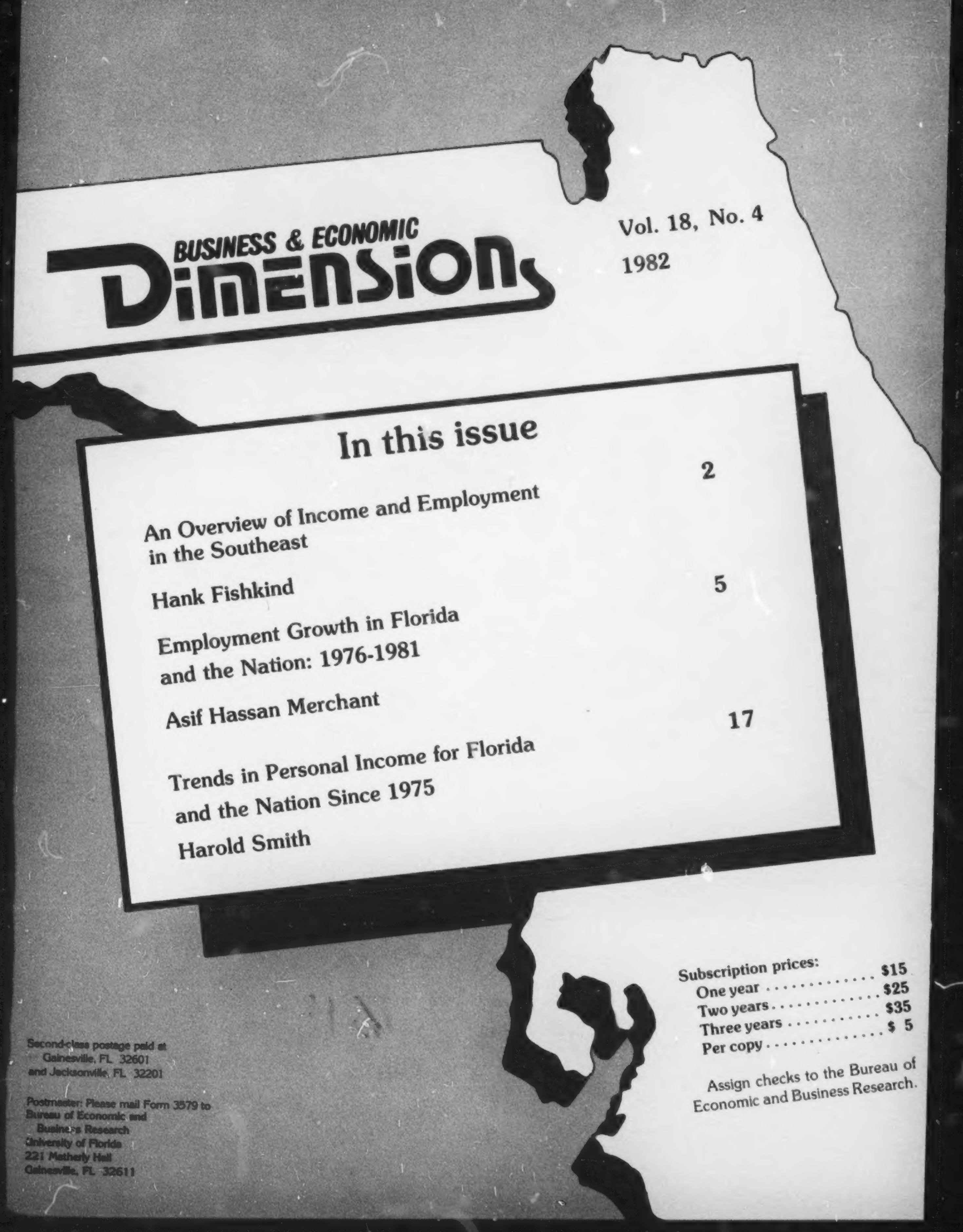
[illegible] A

ISSN 0007-6457

BUSINESS & ECONOMIC DIMENSION

IV 1982

Employment and Income in Florida



BUSINESS & ECONOMIC DIMENSION

Vol. 18, No. 4
1982

In this issue

2
An Overview of Income and Employment in the Southeast
Hank Fishkind
5
Employment Growth in Florida and the Nation: 1976-1981
Asif Hassan Merchant
17
Trends in Personal Income for Florida and the Nation Since 1975
Harold Smith

Second-class postage paid at
Gainesville, FL 32601
and Jacksonville, FL 32201

Postmaster: Please mail Form 3579 to
Bureau of Economic and
Business Research
University of Florida
221 Matherly Hall
Gainesville, FL 32611

Subscription prices: $15
One year $25
Two years.............. $35
Three years .... $ 5
Per copy ....

Assign checks to the Bureau of Economic and Business Research.

Introgram

This issue of *Dimensions* analyzes Florida's growth from 1976 to 1981 by focusing on trends in employment and personal income over the five-year period. Developments at the state, regional and county levels are reviewed and compared in articles prepared by the Bureau staff.

The first issue of 1983 will be devoted to a report of the Florida Economic Outlook Conference to be held in Tampa on January 24. Sponsored by the University of Florida and the Florida Council of 100, the conference is designed to give the state's business leaders a preview of the 1983 economic environment. Paul Volcker, chairman of the Federal Reserve System's Board of Governors, will be the featured speaker.

The second issue of *Dimensions* for 1983 will be devoted to another in our series of annual regional profiles. The southwest region of Florida will be in the spotlight, with an in-depth examination of the economic trends and special problems facing this rapidly growing region.

An Overview of Income and Employment in Florida and the Southeast

Hank Fishkind

Associate Director

Bureau of Economic and Business Research

Over the last 31 years, Florida and the southeast have experienced tremendous economic progress. For example, employment in the southeastern states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee increased by 186.3 percent from 5.1 million in 1950 to 14.6 million in 1981. This increase compares quite favorably to national employment growth which rose by 101.6 percent from 45.2 million in 1950 to 91.1 million in 1981. The southeast also made great strides in per capita personal income. In 1950 per capita personal income in the southeast was just $1,022, or only 68.5 percent of the national total of $1,492. However, by 1981, per capita personal income in the southeast rose to $8,866, equaling 85.5 percent of the U.S. total of $10,491.

Although the southeast has made major economic strides since 1950, recent trends since 1976 suggest that future gains will be more difficult. Economic growth in the region has slowed since 1976, as many states experienced less growth in employment and per capita income than did the nation as a whole. The twin recessions in 1980 and 1981 dealt a harsh blow to the economies of Alabama, Kentucky, Mississippi, North Carolina and South Carolina. Only the economies of Florida and Georgia have substantially outperformed the U.S. economy since 1976.

This article focuses on the trends in employment and per capita income in the southeast and in Florida since 1950. Particular attention is devoted to the reasons behind the regional slowdown in economic progress since 1976 and the exceptionally strong performance of the Florida economy during this difficult period.

Employment and per capita income: 1950 to 1981

During the 26-year period from 1950 through 1976, economic growth in the southeastern states outpaced growth in the nation. Florida's growth was particularly robust, leading all the southeastern states, as the data in Table 1 indicate. For example, between 1950 and 1960 Florida's total nonagricultural employment grew at a 6.5-percent-per-year pace, which was more than twice the growth rate for any of the southeastern states or the nation. Over the next ten years, this pattern repeated itself. Florida's employment grew faster than any southeastern state, and employment growth in each of the southeastern

Table 1.—Growth in total nonagricultural employment in Florida, the southeast and the U.S. (annual growth rate)

	50-60	60-70	70-76	76-81
Florida	6.5	[illegible].0	4.4	5.0
Alabama	2.3	2.7	3.0	2.3
Georgia	2.7	4.0	2.8	3.5
Kentucky	1.8	3.4	3.4	1.4
Mississippi	2.6	3.8	3.7	2.4
North Carolina	2.6	4.1	2.7	2.7
South Carolina	2.4	3.8	3.6	2.9
Tennessee	2.0	3.7	2.9	2.1
United States	1.8	2.7	1.9	2.8

Table 2.—Growth in per capita personal income in Florida, the southeast and the U.S. (annual growth rate)

	50-60	60-70	70-76	76-81
Florida	4.4	6.7	7.8	11.4
Alabama	15.4	6.7	9.8	10.1
Georgia	4.6	7.2	8.6	10.4
Kentucky	5.0	6.9	9.2	9.9
Mississippi	4.7	7.8	9.7	10.8
North Carolina	3.1	7.3	8.8	10.1
South Carolina	2.5	7.8	9.0	10.0
Tennessee	4.5	6.0	8.4	10.0
United States	4.0	5.9	8.4	10.4

states was at or above the national average of 2.7 percent per year. The same pattern of employment growth occurred between 1970 and 1976, as Florida led the southeastern states, which in turn led the nation.

However, between 1976 and 1981 this long-standing pattern was broken. Although Florida continued to generate jobs well above the national average, most of the southeastern states fell behind the national average of 2.8 percent per year for employment growth. The states falling behind the national average during the 1976 to 1981 interval included Alabama, Kentucky, Mississippi, North Carolina and Tennessee. South Carolina barely topped the national average. Only Florida and Georgia continued to outperform the nation between 1976 and 1981.

The trends in per capita personal income since 1950 are consistent with those for employment discussed above. Between 1950 and 1976, the southeastern states generally experienced more rapid growth in per capita income than did the nation (see Table 2). However, since 1976, gains in per capita income have been stronger nationally than in the southeast. Among the southeastern states, only Florida's per capita income growth outpaced the nation's. Over the five years ending in 1981, Florida's per capita income grew at an annual rate of 11.4 percent compared to 10.4 percent in the U.S.

Table 3.—Behavior of total nonagricultural employment during recessions: southeastern states vs. U.S. (percentage change in total nonagricultural employment: state—U.S.)

	69-70	74-75	79-80	81-82	August
Florida	3.3	-2.4	5.0	2.7	2.2
Alabama	0.3	0.5	-0.9	0.8	0.2
Georgia	1.0	-2.2	0.3	1.4	0.1
Kentucky	1.0	1.1	-2.3	-0.6	-0.2
Mississippi	1.2	-0.9	-1.5	-1.3	-0.6
North Carolina	1.3	-1.6	-0.1	-0.6	-0.3
South Carolina	2.0	-0.5	0.4	0.6	0.6
Tennessee	0.7	-1.7	-3.0	1.5	-0.6

What caused the slowdown in economic growth in the Southeast, and why did Florida continue to prosper?

There are many reasons for the relatively poor performance of the southeastern economy over the last five years, including rapid inflation, high interest rates, imports, energy costs and the long-run shift toward a more service-oriented economy. However, at a basic level, the economies of most southeastern states have become more prone to recession. During expansions in the business cycle, the economies of most states grow at similar rates, but during recessions major differences appear. Table 3 focuses on this phenomenon by comparing the growth in total nonagricultural employment for the southeastern states to the U.S. during the last four recessions. The data are expressed as the difference between growth in total nonagricultural employment in the state minus that for the U.S.

For example, during the 1969-70 recession Florida's growth in total nonagricultural employment was three percentage points greater than the national level. Furthermore, except for the 1974-75 recession, Florida's economy has outperformed the nation's during each recession. Finally, the Florida economy on average has experienced 2.2 percent greater growth in jobs during recessions than has the nation. By contrast, the recession behavior of Kentucky, Mississippi, North Carolina and Tennessee has been worse than the nation's during the last four recessions. Job creation in Alabama, Georgia and South Carolina was little different than nationally during the recessions.

Recently, most southeastern states have experienced slow economic growth because of their industrial structures. These southeastern states have manufacturing sectors which are dominated by slow-growing textile, metals and forest products industries. Rising energy costs and inflation have hurt these industries nationwide, and because there is a large proportion of these firms in the southeast, the region's economy has suffered. This situation is exacerbated by the increases in imported textiles and metals which become more onerous during business downturns. It is ironic that the very industries which spurred economic growth in the southeast during the 1950s and 1960s have become sources of weakness during the 1970s.

Florida has escaped the slowdown apparent in other southeastern states because its industrial structure is quite different. Florida has few of the slower-growing manufacturing industries which dominate economic developments in many other southeastern states. Instead, Florida's employment rolls are dominated by the trade and service sectors which have continued to grow strongly in response to continued strong rates of population growth. Furthermore, the recent expansion in Florida's manufacturing sector has come in the form of electronics, electrical machinery and defense-related products. Each of these industries is a source of strength.

Employment Growth in Florida and the Nation: 1976-1981

Asif Hassan Merchant
Graduate Assistant
Bureau of Economic and Business Research

Both Florida and the United States experienced rapid increases in employment between 1976 and 1981. Nonagricultural employment soared by 37.2 percent in Florida over the five-year period, as the number of jobs expanded by 972,880. Nationwide, nonagricultural employment increased by a robust 14.8 percent as more than 11.7 million new jobs were generated from 1976 to 1981. The five-year change for each county in Florida is displayed in Figure 1, while Figure 2 illustrates current levels of employment in each county.

While all employment categories in Florida and most in the U.S. have expanded strongly since 1976, Florida's rapid growth in manufacturing and construction has contrasted sharply with much slower growth nationwide. Since 1976, Florida's manufacturing employment has risen by 36.8 percent, compared to a gain of just 6.2 percent nationally. Similarly, construction employment in Florida has nearly doubled since 1976 (up 75.7 percent) compared to a 16.9-percent gain nationwide.

Although the overall Florida economy has grown rapidly since 1976, generating many new jobs, all regions of the state did not perform equally. For example, total nonagricultural employment increased most rapidly in the central and southwest areas of the state and most slowly in the northeast and northwest sections. These disparities in economic growth are even more apparent at the county level. While six counties experienced increases in new jobs of more than 80 percent (Baker, Collier, Hernando, Pasco, Martin and Flagler), Gulf and Glades counties actually lost employment between 1976 and 1981.

This article examines the growth of employment since 1976 in each of Florida's 67 counties. Comparisons are made among the counties, the multicounty regions of Florida and the entire state, and both the rate of growth and the absolute number of new jobs created are examined. Finally, since Florida's growth in manufacturing and construction employment since 1976 was so noteworthy compared to the U.S., trends for these two industries in each county in Florida are studied.

To facilitate the discussion, Florida is divided into five regions. The northwest region contains Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton and Washington counties. The northeast region is Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Gilchrist, Hamilton, Lafayette, Levy, Marion, Nassau, Putnam, St. Johns, Suwannee and Union counties. Eight counties comprise the central region: Brevard, Flagler, Lake, Orange, Osceola, Seminole, Sumter and Volusia. The southeast has Broward, Dade, Glades, Hendry, Indian River, Martin, Monroe, Okeechobee, Palm Beach and St.

Figure 1.—Change in nonagricultural employment by county: 1976-1981 (in thousands)

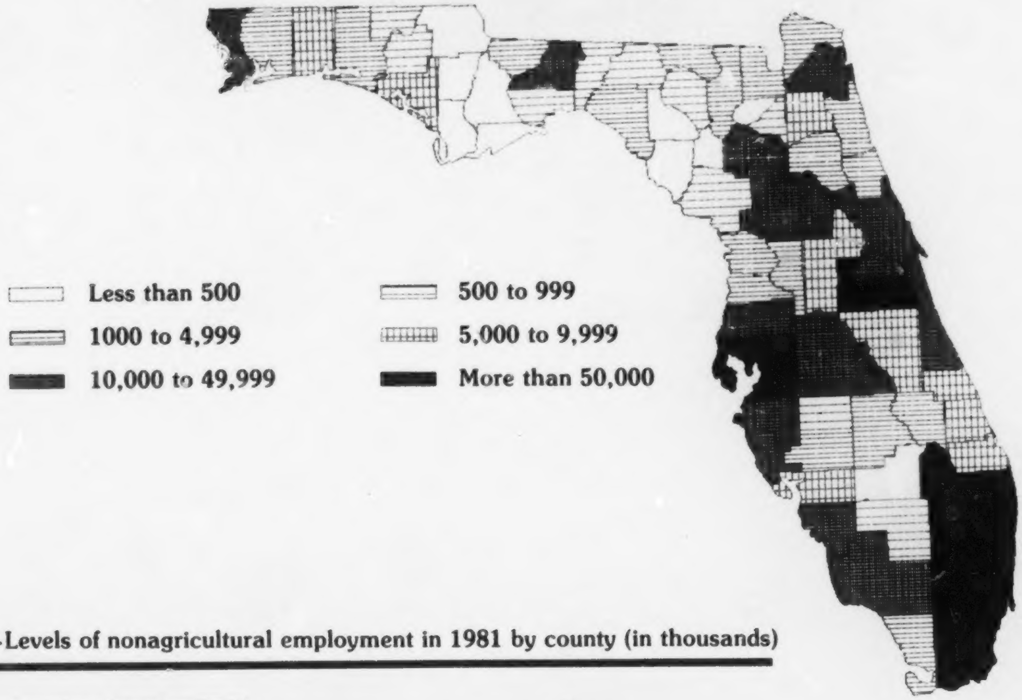

Less than 500
500 to 999
1000 to 4,999
5,000 to 9,999
10,000 to 49,999
More than 50,000

Figure 2.—Levels of nonagricultural employment in 1981 by county (in thousands)

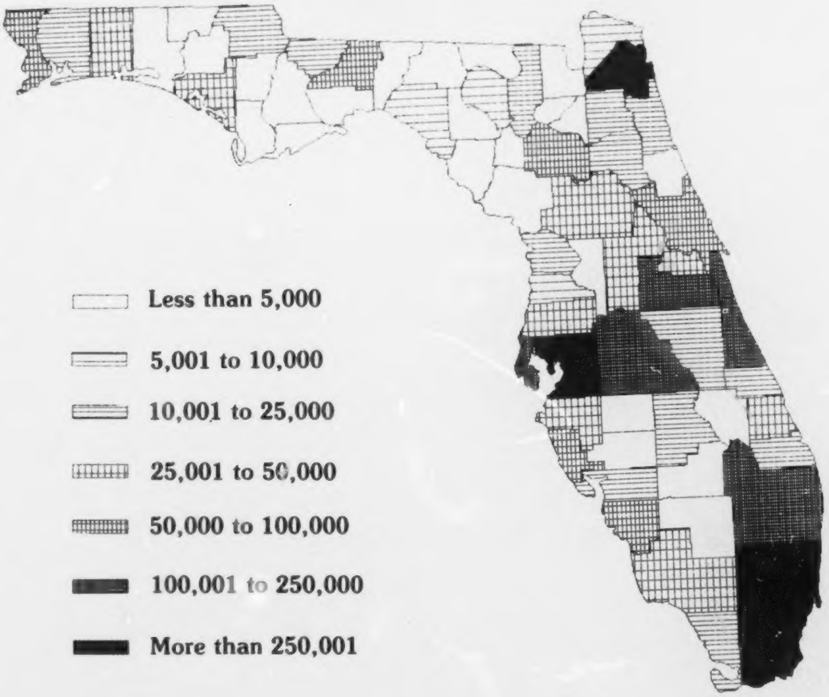

Less than 5,000
5,001 to 10,000
10,001 to 25,000
25,001 to 50,000
50,000 to 100,000
100,001 to 250,000
More than 250,001

Table 1.—Nonagricultural employment: Northwest region (thousands)

Counties	1976	1981	Absolute growth 1976–1981	Percentage change 1976–1981
Bay	27.25	33.86	6.61	24.3
Calhoun	1.59	1.95	0.36	22.6
Escambia	73.16	86.26	13.10	17.9
Franklin	1.26	1.54	0.28	22.2
Gadsden	7.50	10.24	2.74	36.5
Gulf	3.20	3.02	-0.18	-5.6
Holmes	1.83	2.43	0.60	32.8
Jackson	9.81	10.26	0.45	4.6
Jefferson	1.51	2.02	0.51	33.8
Leon	54.14	72.68	18.54	34.2
Liberty	0.49	0.81	0.32	65.3
Madison	2.56	3.13	0.57	22.3
Okaloosa	26.62	34.53	7.91	29.7
Santa Rosa	8.64	11.22	2.58	29.9
Taylor	4.67	5.88	1.21	25.9
Wakulla	1.40	1.95	0.55	39.3
Walton	2.98	4.02	1.04	34.9
Washington	2.57	3.19	0.62	24.1
Region	231.16	283.99	57.83	25.0
Florida	2,617.30	3,590.18	972.88	37.2
United States	79,379.10	91,107.90	11,728.80	14.8

Lucie counties. The southwest region includes Charlotte, Citrus, Collier, DeSoto, Hardee, Hernando, Highlands, Hillsborough, Lee, Manatee, Pasco, Pinellas, Polk and Sarasota counties.

Northwest region

The northwest region has experienced 25-percent growth in total nonagricultural employment from 1976 to 1981 (see Table 1). Since this growth was below the statewide average of 37.2 percent, the northwest region's share of total state nonagricultural employment fell from 8.8 percent to 8.4 percent. Industrial growth has been increasing slowly in the region, even though many panhandle cities have promoted industrial development with some measure of success. Within the region, there were wide differences in employment growth. For example, increases in new jobs were most rapid in Liberty, 65.3 percent; Wakulla, 39.3 percent; and Gadsden, 36.5 percent. Highest absolute growth was in Leon (18,540). Employment in Gulf County declined by 5.6 percent.

In manufacturing employment, Okaloosa County experienced a growth of 93.2 percent (see Table 2). Other counties with high-percentage increases were Liberty, 64.7 percent; Jefferson, 53.8 percent; and Holmes, 46.4 percent. Okaloosa County also had the highest absolute growth in manufacturing of 1,500. By contrast, manufacturing employment in Franklin, Jackson and Escambia counties declined at rates of 35.3, 4.8 and 2.7 percent, respectively.

As the data in Table 3 show, construction employment grew most rapidly in Wakulla, 100 percent; Franklin, 100 percent; Escambia, 55 percent; and Madison, 50 percent. Okaloosa and Holmes had growth rates of 32.5 percent and 25.0 percent, respectively. Highest absolute growth was in Escambia (2,750).

Table 2.—Manufacturing employment: Northwest region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Bay	3.60	3.82	0.22	6.1
Calhoun	0.53	0.57	0.04	7.5
Escambia	11.18	10.88	-0.30	-2.7
Franklin	0.17	0.11	-0.06	-35.3
Gadsden	1.01	1.56	0.55	54.5
Gulf	1.31	1.34	0.03	2.3
Holmes	0.56	0.82	0.26	46.4
Jackson	1.86	1.77	-0.09	-4.8
Jefferson	0.26	0.40	0.14	53.8
Leon	1.98	2.86	0.88	44.4
Liberty	0.17	0.28	0.11	64.7
Madison	0.83	1.07	0.24	28.9
Okaloosa	1.61	3.11	1.50	93.2
Santa Rosa	1.69	1.84	0.15	8.9
Taylor	1.84	2.31	0.47	25.5
Wakulla	0.44	0.61	0.17	38.6
Walton	0.70	0.84	0.14	20.0
Washington	0.31	0.32	0.01	3.1
Region	30.04	34.51	4.47	14.9
Florida	347.97	476.19	128.22	36.8
United States	18,996.00	20,174.20	1,178.20	6.2

Table 3.—Construction employment: Northwest region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Bay	2.08	2.42	0.34	16.3
Calhoun	0.08	0.10	0.02	25.0
Escambia	5.00	7.75	2.75	55.0
Franklin	0.01	0.02	0.01	100.0
Gadsden	0.38	0.42	0.04	10.5
Gulf	0.57	0.06	-0.51	-89.5
Holmes	0.04	0.05	0.01	25.0
Jackson	0.35	0.39	0.04	11.4
Jefferson	0.11	0.14	0.03	27.3
Leon	2.96	3.59	0.63	21.3
Liberty	NA	0.04	NA	NA
Madison	0.04	0.06	0.02	50.0
Okaloosa	1.94	2.57	0.63	32.5
Santa Rosa	0.79	0.93	0.14	17.7
Taylor	NA	0.81	NA	NA
Wakulla	0.02	0.04	0.02	100.0
Walton	0.14	0.18	0.04	28.6
Washington	0.25	0.19	-0.06	-24.0
Region	15.19	19.75	4.56	30.0
Florida	155.33	272.85	117.52	75.7
United States	3,576.00	4,179.50	603.50	16.9

NA Not available.

Table 4.—Nonagricultural employment: Northeast region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Alachua	51.60	66.44	14.84	28.8
Baker	1.52	3.02	1.50	98.7
Bradford	2.89	3.66	0.77	26.6
Clay	7.84	13.42	5.58	71.2
Columbia	8.52	10.58	2.06	24.2
Dixie	1.42	1.78	0.36	25.4
Duval	216.14	250.05	33.91	15.7
Gilchrist	0.73	0.90	0.17	23.3
Hamilton	3.04	4.08	1.04	34.2
Lafayette	0.30	0.43	0.13	43.3
Levy	2.89	3.40	0.51	17.6
Marion	25.34	36.52	11.18	44.1
Nassau	7.14	8.51	1.37	19.2
Putnam	9.76	11.87	2.11	21.6
St. Johns	10.28	13.76	3.48	33.9
Suwannee	4.66	5.43	0.77	16.5
Union	1.96	2.37	0.41	20.9
Region	356.02	436.21	80.19	22.5
Florida	2,617.30	3,590.18	972.88	37.2
United States	79,379.10	91,107.90	11,728.80	14.8

In contrast to these gains, Gulf and Washington counties lost construction jobs at rates of 89.5 percent and 24.0 percent, respectively.

Northeast region

The northeast region experienced the lowest growth in total nonagricultural employment (see Table 4), with an increase of 22.5 percent, while the region's share of total state nonagricultural employment fell from 13.6 percent in 1976 to 12.2 percent in 1981.

The highest percentage increases were in Baker, 98.7 percent; Clay, 71.2 percent; Lafayette, 43.3 percent; and Marion, 44.1 percent. However, the largest absolute growth in employment (33,910) was in Duval. St. Johns and Alachua counties also experienced rapid growth, with rates of 33.9 percent and 28.8 percent, respectively. In the northeast, no county had a decline in jobs since 1976.

Regional employment growth is dominated by the area's three SMSAs: Jacksonville, Gainesville and Ocala. As the data in Table 5 indicate, the northeast region's 20.7-percent gain in manufacturing employment, while stronger than the 6.2-percent gain nationwide, is still less than the statewide growth rate. Counties with the strongest increases in manufacturing employment were Clay, 143.8 percent; Union, 100.0 percent; Marion, 79.5 percent; Levy, 63.0 percent; and Suwannee, 37.3 percent. The largest absolute gain (3,700) was in Duval. Manufacturing employment declined in St. Johns, Lafayette, Columbia and Putnam counties at rates of 50.8, 33.3, 9.4 and 6.4 percent, respectively.

In the northeast, construction employment increased by 40.2 percent (see Table 6). The highest growth rates were in Lafayette, 300.0 percent; Bradford, 140.3 percent; Baker, 166.7 percent; Nassau, 147.1 percent; and Clay, 119.0 percent. Marion, Putnam, Alachua and Union counties experienced

Table 5.—Manufacturing employment: Northeast region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Alachua	4.08	4.56	0.48	11.8
Baker	0.13	0.16	0.03	23.1
Bradford	0.41	0.47	0.06	14.6
Clay	0.48	1.17	0.69	143.8
Columbia	1.60	1.45	-0.15	-9.4
Dixie	0.43	0.49	0.06	14.0
Duval	25.37	29.07	3.70	14.6
Gilchrist	0.04	0.04	0.00*	12.2
Hamilton	1.61	NA	NA	NA
Lafayette	0.03	0.02	-0.01	-33.3
Levy	0.46	0.75	0.29	63.0
Marion	3.56	6.39	2.83	79.5
Nassau	2.55	2.65	0.10	3.9
Putnam	3.42	3.20	-0.22	-6.4
St. Johns	1.28	0.63	-0.65	-50.8
Suwannee	1.02	1.40	0.38	37.3
Union	0.20	0.40	0.20	100.00
Region	46.67	56.35	9.68	20.7
Florida	347.97	476.19	128.22	36.8
United States	18,996.00	20,174.20	1,178.20	6.2

*Growth of 5.
NA Not available.

Table 6.—Construction employment: Northeast region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Alachua	2.30	3.42	1.12	48.7
Baker	0.03	0.08	0.05	166.7
Bradford	0.05	0.12	0.07	140.0
Clay	0.42	0.92	0.50	119.0
Columbia	0.21	0.35	0.14	66.7
Dixie	NA	0.12	NA	NA
Duval	12.06	15.39	3.33	27.6
Gilchrist	0.03	0.03	0.00*	5.3
Hamilton	0.09	0.08	-0.01	-11.1
Lafayette	0.01	0.04	0.03	300.0
Levy	0.31	0.22	-0.09	-29.0
Marion	1.39	3.00	1.61	115.8
Nassau	0.17	0.42	0.25	147.1
Putnam	0.45	0.82	0.37	82.2
St. Johns	0.60	0.63	0.03	5.0
Suwannee	0.23	0.20	-0.03	-13.0
Union	0.03	0.04	0.01	33.3
Region	18.46	25.88	7.42	40.2
Florida	155.33	272.85	117.52	75.7
United States	3,576.00	4,179.50	603.50	16.9

*Growth of 1.
NA Not available.

Table 7.—Nonagricultural employment: Central region (thousands)

Counties	1976	1981	Absolute growth 1976–1981	Percentage change 1976–1981
Brevard	72.94	104.65	31.71	43.5
Flagler	1.66	2.99	1.33	80.1
Lake	20.43	27.17	6.74	33.0
Orange	167.28	231.69	64.41	38.5
Osceola	9.22	14.68	5.46	59.2
Seminole	27.79	47.36	19.57	70.4
Sumter	2.60	4.23	1.63	62.7
Volusia	56.86	79.00	22.14	38.9
Region	361.37	516.00	154.63	42.8
Florida	2,617.30	3,590.18	972.88	37.2
United States	79,379.10	91,107.90	11,728.80	14.8

growth rates of 115.8, 82.2, 48.7 and 33.3 percent, respectively. However, construction employment declined in Levy, Suwannee and Hamilton at rates of 29.0, 13.0 and 11.1 percent, respectively.

Since the region's growth in manufacturing and construction was below the state averages, its corresponding share of total state manufacturing employment declined from 13.4 percent in 1976 to 11.8 percent in 1981. However, its share of total state construction employment increased from 9.3 percent to 9.5 percent during the five-year period.

Central region

Table 7 contains data on employment growth in central Florida, which was one of the state's fastest-growing regions between 1976 and 1981. In every county except for Lake, nonagricultural employment gains outpaced the statewide average. Since 1976, total nonagricultural employment grew 42.8 percent, compared to 37.2 percent in Florida, while the region's share of total state nonagricultural employment increased from 13.8 percent in 1976 to 14.4 percent in 1981. The highest growth rates were in Flagler, 80.1 percent; Seminole, 70.4 percent; Sumter, 62.7 percent; and Osceola, 59.2 percent. Orange County posted a region-leading gain of 64,413 new jobs.

The region enjoyed a very significant gain in manufacturing employment (see Table 8). More than 31,000 new manufacturing jobs in the region were generated since 1976 for a gain of 68.7 percent. Every county experienced strong growth, except for Osceola. Counties with the highest percentage growth were Sumter, 133.3 percent; Brevard, 112.8 percent; and Seminole, 108.1 percent, while Flagler and Lake counties had growth rates of 87.5 and 56.6 percent, respectively. The highest absolute growth (12,630) was in Brevard County. The area has benefited from industrial expansion by Western Electric, Westinghouse, Burroughs, Martin Marietta, and Harris.

Table 9 displays the data on construction employment. Since 1976, the region's construction employment has almost doubled. The 91.6-percent increase was due to high growth rates in Flagler, 380.0 percent; Osceola, 151.9 percent; Seminole, 121.4 percent; and Volusia, 100.4 percent. The biggest absolute growth was in Orange County, with 7,970 new jobs. Every county exhibited robust gains in construction employment, except for Lake County.

As a result of above-average growth in both manufacturing and construction, the region's share of Florida's manufacturing employment increased from 13.2 percent in 1976 to 16.2 percent in 1981. In construction, it increased from 12.3 percent in 1976 to 13.4 percent in 1981.

Table 8.—Manufacturing employment: Central region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Brevard	11.20	23.83	12.63	112.8
Flagler	0.16	0.30	0.14	87.5
Lake	2.42	3.79	1.37	56.6
Orange	19.76	28.68	8.92	45.1
Osceola	1.19	1.43	0.24	20.2
Seminole	4.59	9.55	4.96	108.1
Sumter	0.24	0.56	0.32	133.3
Volusia	6.20	9.04	2.84	45.8
Region	45.76	77.18	31.42	68.7
Florida	347.97	476.19	128.22	36.8
United States	18,996.00	20,174.20	1,178.20	6.2

Table 9.—Construction employment: Central region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Brevard	3.45	6.60	3.15	91.3
Flagler	0.05	0.24	0.19	380.0
Lake	1.43	2.00	0.57	39.9
Orange	9.11	17.08	7.97	87.5
Osceola	0.27	0.68	0.41	151.9
Seminole	2.01	4.45	2.44	121.4
Sumter	0.08	0.14	0.06	75.0
Volusia	2.69	5.39	2.70	100.4
Region	19.10	36.59	17.49	91.6
Florida	155.33	272.85	117.52	75.6
United States	3,576.00	4,179.50	603.50	16.9

Southeast region

The southeast region's 39.1-percent growth in nonagricultural employment is higher than both the state and national averages (see Table 10). Its share of total state nonagricultural employment increased from 38.5 percent in 1976 to 39 percent in 1981, which was due to high growth rates in Martin, 81.1 percent; Palm Beach, 58.4 percent; Broward, 55.8 percent; and St. Lucie, 54.8 percent. Dade County experienced the largest absolute growth, with 154,860 more jobs. On the other hand, Glades County experienced a 26.7-percent decline.

Employment in manufacturing increased by 35.2 percent (see Table 11). This gain was lower than the state increase but higher than the national average. Counties with highest gains were Broward, 78.8 percent; Okeechobee, 75.0 percent; and Palm Beach, 58.4 percent. The growth rate in Martin County

Table 10.—Nonagricultural employment: Southeast region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Broward	229.98	358.25	128.27	55.8
Dade	574.80	729.66	154.86	26.9
Glades	0.86	0.63	-0.23	-26.7
Hendry	3.41	4.23	0.82	24.0
Indian River	13.45	19.30	5.85	43.5
Martin	11.57	20.95	9.38	81.1
Monroe	15.76	20.36	4.60	29.2
Okeechobee	2.91	4.23	1.32	45.4
Palm Beach	137.25	217.38	80.13	58.4
St. Lucie	16.38	25.36	8.98	54.8
Region	1,006.37	1,400.34	393.97	39.1
Florida	2,617.30	3,590.18	972.88	37.2
United States	79,379.10	91,107.90	11,728.80	14.8

was 56.7 percent, while the highest absolute growth (19,060) was in Broward. In contrast to these gains, growth in Monroe, Indian River and Hendry counties declined by 15, 4.2 and 3.9 percent, respectively.

Construction employment enjoyed a robust 97.2-percent growth rate, which is higher than both state and national averages. There was considerable growth in most counties, due to construction of a rapid transit system and several condominium projects. As Table 12 shows, the highest growth rates were in St. Lucie, 323.5 percent; Martin, 205.5 percent; Palm Beach, 132.0 percent; Indian River, 120.8 percent; Monroe, 107.1 percent; and Broward, 92.1 percent. Dade County had 17,560 new jobs.

Since the region's growth in manufacturing employment was below the state average, its share of state manufacturing employment fell from 38.7 percent in 1976 to 38.3 percent in 1981. However, due to considerable growth in construction employment, the region's share of the state totals in this category increased from 34.6 percent to 38.8 percent during the five-year period.

Southwest region

This region experienced a growth rate of 43.1 percent (see Table 13), which is higher than both statewide and national averages. Because of this high-growth average, its share of total state nonagricultural employment increased from 25.1 percent in 1976 to 26.2 percent in 1981. Within the region, the highest percentage increases were in Collier, 96.3 percent; Pasco, 88.1 percent; Hernando, 88.1 percent; Lee, 70.6 percent; Charlotte, 67.7 percent; and Citrus, 57.6 percent. Other high gains were in Sarasota, 51.5 percent; Manatee, 50.2 percent; and DeSoto, 49.5 percent. However, the largest absolute growth was in Hillsborough, with 71,800 new jobs. None of the counties showed a decline in nonagricultural employment.

Manufacturing employment increased by 38.8 percent (see Table 14), which is higher than both state and national averages. The area also had the highest manufacturing employment growth rate of any region. Within the region, Charlotte experienced the highest growth rate of 117.6 percent followed by Collier, 103.3 percent; Hernando, 74.5 percent; Sarasota, 72 percent; and Pinellas, 57.1 percent. Other counties with high growth rates were Manatee, 50.6 percent; and Lee, 45.7 percent. However, highest absolute growth was in Pinellas (14,200). In contrast to these gains, Citrus and Highlands counties experienced declining rates of 73.6 and 2 percent, respectively.

Construction employment grew considerably during 1976-81, as Table 15 shows,

Table 11.—Manufacturing employment: Southeast region (thousands)

Counties	1976	1981	Absolute growth 1976–1981	Percentage change 1976–1981
Broward	24.19	43.25	19.06	78.8
Dade	83.78	100.48	16.70	19.9
Glades	NA	0.00*	NA	NA
Hendry	0.76	0.73	-0.03	-3.9
Indian River	2.83	2.71	-0.12	-4.2
Martin	1.78	2.79	1.01	56.7
Monroe	0.80	0.68	-0.12	-15.0
Okeechobee	0.12	0.21	0.09	75.0
Palm Beach	18.61	29.47	10.86	58.4
St. Lucie	1.60	2.03	0.43	26.9
Region	134.83	182.35	47.52	35.2
Florida	347.97	476.19	128.22	36.8
United States	18,996.00	20,174.20	1,178.20	6.2

*Total manufacturing employment was 4.
NA Not available.

Table 12.—Construction employment: Southeast region (thousands)

Counties	1976	1981	Absolute growth 1976–1981	Percentage change 1976–1981
Broward	16.42	31.54	15.12	92.1
Dade	23.94	41.50	17.56	73.4
Glades	0.03	NA	NA	NA
Hendry	0.15	0.25	0.10	66.7
Indian River	1.06	2.34	1.28	120.8
Martin	1.10	3.36	2.26	205.5
Monroe	0.70	1.45	0.75	107.1
Okeechobee	0.15	0.29	0.14	93.3
Palm Beach	9.32	21.62	12.30	132.0
St. Lucie	0.85	3.60	2.75	323.5
Region	53.72	105.96	52.24	97.2
Florida	155.33	272.85	117.52	75.7
United States	3,576.00	4,179.50	603.50	16.9

NA Not available.

Table 13.—Nonagricultural employment: Southwest region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Charlotte	8.57	14.37	5.80	67.7
Citrus	7.17	11.30	4.13	57.6
Collier	15.76	30.94	15.18	96.3
De Soto	3.21	4.80	1.59	49.5
Hardee	2.53	3.50	0.97	38.3
Hernando	4.89	9.20	4.31	88.1
Highlands	7.80	10.87	3.07	39.4
Hillsborough	208.82	280.62	71.80	34.4
Lee	41.32	70.50	29.18	70.6
Manatee	29.90	44.92	15.02	50.2
Pasco	18.10	34.04	15.94	88.1
Pinellas	180.16	247.13	66.97	37.2
Polk	88.88	118.13	29.25	32.9
Sarasota	47.91	72.56	24.65	51.5
Region	657.81	941.57	283.76	43.1
Florida	2,617.30	3,590.18	972.88	37.2
United States	79,379.10	91,107.90	11,728.80	14.8

increasing by 73.3 percent in 1981. This rate is higher than the national average but lower than the state average. The region's increase in construction employment was higher than the northeast and northwest regions', but lower than the central and southeast regions'. The southwest area continues to rely on the construction industry that expands as a natural response to the influx of retirees to this area. The retirees are relatively wealthy and therefore, industrial growth is not required to keep balance with population growth.

Within the region, counties with high construction employment growth rates were Hernando, 275.0 percent; Charlotte, 223.4 percent; Collier, 178.3 percent; Citrus, 151.6 percent; Manatee, 135.8 percent; Pasco, 130.3 percent; and Lee, 107.6 percent. Other counties with high growth rates were Sarasota, 79.0 percent; Pinellas, 61.1 percent; and Highlands, 53.3 percent. Hillsborough County's 5,920 new jobs was the highest absolute gain. Charlotte, Collier and Sarasota counties continue to rely on economic diversification strategy. DeSoto County had the only declining growth rate in construction employment (10.0 percent).

The southwest's share of Florida's manufacturing employment has increased slightly from 26.1 percent in 1976 to 26.4 percent in 1981; however, the region's share of construction employment has declined from 31.5 percent to 31 percent during the five-year period.

Conclusion

Florida's nonagricultural employment growth has been more volatile than that of the U.S. during the five-year period. This condition is reflected markedly in both manufacturing and construction. The southwest region continues to dominate in highest percentage growth, and its exceptional growth is expected to continue as the influx of retirees to the region continues. The northeast area experienced a growth of 22.5 percent, which is the lowest among the regions, and its employment is expected to increase as business migrates from south Florida and new business from the north continues to locate in the Jacksonville area.

Table 14.—Manufacturing employment: Southwest region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Charlotte	0.17	0.37	0.20	117.6
Citrus	1.93	0.51	-1.42	-73.6
Collier	0.61	1.24	0.63	103.3
De Soto	0.29	0.40	0.11	37.9
Hardee	0.32	0.41	0.09	28.1
Hernando	0.51	0.89	0.38	74.5
Highlands	0.76	0.75	0.00*	-2.0
Hillsborough	29.71	38.10	8.39	28.2
Lee	2.82	4.11	1.29	45.7
Manatee	5.08	7.65	2.57	50.6
Pasco	2.63	3.05	0.42	16.0
Pinellas	24.88	39.08	14.20	57.1
Polk	17.20	22.79	5.59	32.5
Sarasota	3.75	6.45	2.70	72.0
Region	90.66	125.80	35.14	38.8
Florida	347.97	476.19	128.22	36.8
United States	18,996.00	20,174.20	1,178.20	6.2

*Growth of 15.

Table 15.—Construction employment: Southwest region (thousands)

Counties	1976	1981	Absolute growth 1976-1981	Percentage change 1976-1981
Charlotte	0.64	2.07	1.43	223.4
Citrus	0.62	1.56	0.94	151.6
Collier	1.80	5.01	3.21	178.3
De Soto	0.10	0.09	-0.01	-10.0
Hardee	0.08	0.11	0.03	37.5
Hernando	0.24	0.90	0.66	275.0
Highlands	0.60	0.92	0.32	53.3
Hillsborough	13.86	19.78	5.92	42.7
Lee	4.46	9.26	4.80	107.6
Manatee	1.87	4.41	2.54	135.8
Pasco	1.52	3.50	1.98	130.3
Pinellas	12.02	19.37	7.35	61.1
Polk	6.77	10.02	3.25	48.0
Sarasota	4.28	7.66	3.38	79.0
Region	48.86	84.67	35.81	73.3
Florida	155.33	272.85	117.52	75.6
United States	3,576.00	4,179.50	603.50	16.9

Trends in Personal Income for Florida and the Nation Since 1975

Harold Smith
Graduate Assistant
Bureau of Economic and Business Research

This article examines trends in personal income and per capita personal income since 1975 for Florida, its counties and the United States. Florida's performance is compared to the nation's, and trends for the state's 67 counties are discussed. Between 1975 and 1980, personal income in Florida soared by 87.8 percent. Over this same five-year period, personal income in the U.S. grew at a slower rate of 71.9 percent. Florida's greater gain in personal income was due to its 15.5 percent population growth rate between 1975 and 1980, which was nearly three times faster than the national population growth of 4.8 percent. When income is expressed in per capita terms, Florida's income rose from $5,530 in 1975 to $8,993 by 1980. This 62.6-percent growth in per capita income was just slightly less than the national gain of 62.8 percent from $5,842 in 1975 to $9,511 in 1980 (see Table 1). Florida's per capita income levels for 1980 are shown by county in Figure 1 and on a regional basis in Figure 2 by a weighted average based on population.

Personal income is composed of several elements, the largest of which is wages and salaries. A second form of labor income is referred to as "other labor and proprietor's income." The two elements are reported on a place-of-work basis. Since income reports are based on place of residence, when wage earners work in one jurisdiction but live in another, an adjustment must be made in personal income to reflect this. The "residence adjustment" is the third element of personal income, while Social Security contributions, which are subtracted, are the fourth component. Dividends, interest and rents are the fifth contributor to personal income. The final element is transfer payments which include Social Security, unemployment compensation and welfare. For this article, the sum of the first four components will be labeled as net labor.

These six components of personal income exhibit similar trends in both the U.S. and in Florida (see Table 2). The fastest-growing component of personal income is dividends, interest and rent, which since 1975 has grown 98.9 percent in Florida and 94.4 percent nationally. The slowest-growing component was transfer payments, which measured 84.8 percent in Florida and 65.0 percent nationwide. As a percentage of personal income, transfer payments accounted for 14.2 percent of the nation's total in 1972 and 13.6 percent in 1980. In contrast, transfer payments in Florida represented 17.6 percent of personal income in 1975 and 17.2 percent in 1980, which indicates the proportion of personal income accounted for by transfer payments is gradually being reduced in the state. A closer examination of the state's population increase reveals that the most significant change occurred in the 25-44 age group, which accounted for approximately one quarter of the population in 1980. This age group increased by 29.6 percent during the 1975-1980 period, and was followed by a 15.7-percent increase in

Figure 1.—Per capita income levels by county: 1980

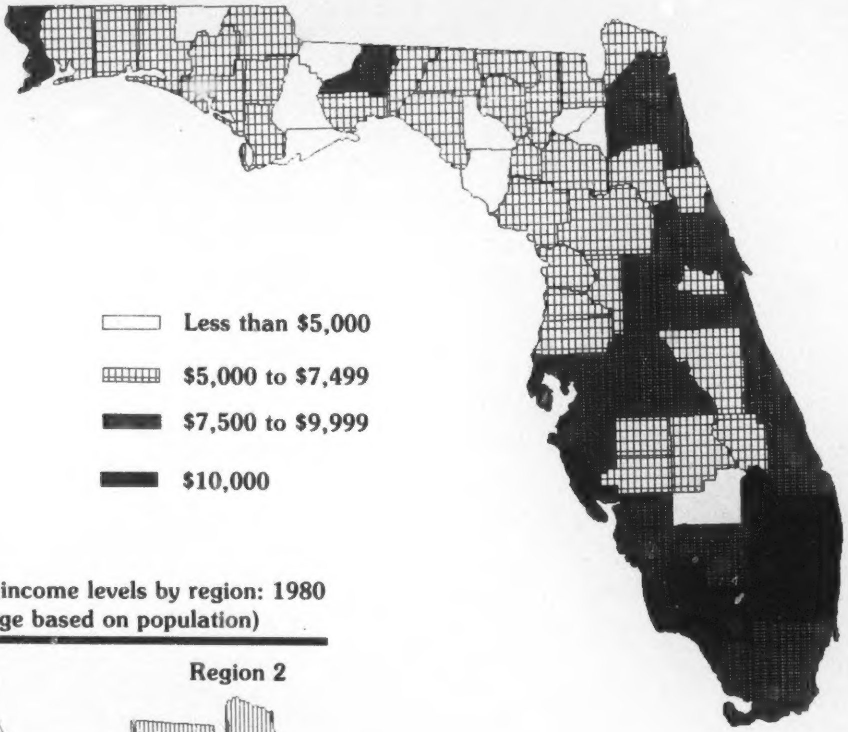
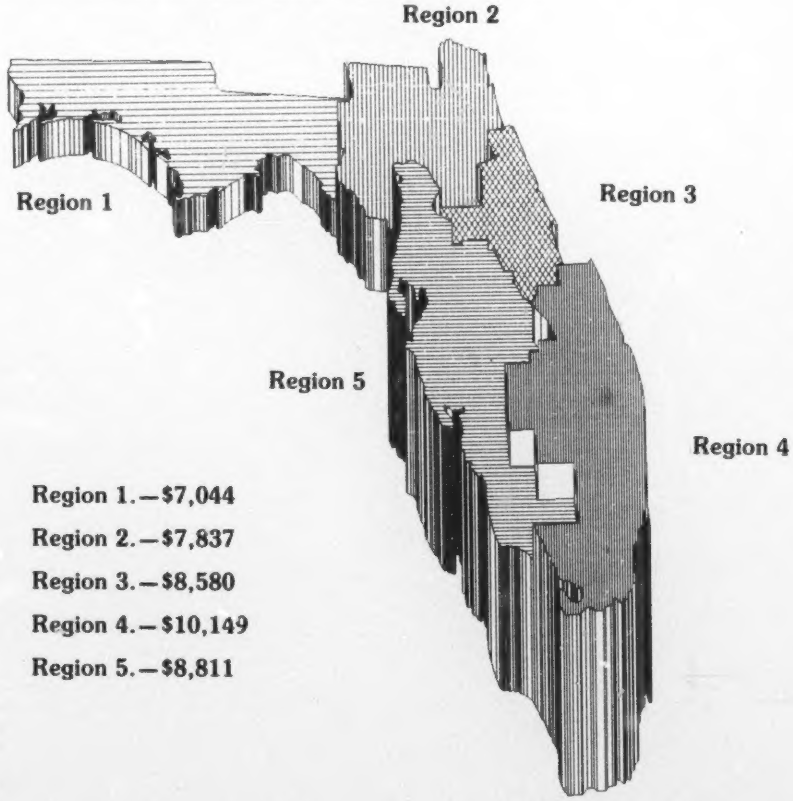

□ Less than $5,000
▦ $5,000 to $7,499
▩ $7,500 to $9,999
■ $10,000

Figure 2.—Per capita income levels by region: 1980
(weighted average based on population)


Region 2
Region 1
Region 3
Region 5
Region 4

Region 1.—$7,044
Region 2.—$7,837
Region 3.—$8,580
Region 4.—$10,149
Region 5.—$8,811

Table 1.—Per capita income (dollars)

	1975	1980	$ change	% change
Florida	5,530	8,993	3,463	62.6
United States	5,842	9,511	3,669	62.8

Table 2.—Components of personal income (millions)

Item	1975	1980	$ change	% change
Total personal income				
Florida	47,233	88,693	41,460	87.8
United States	1,258,643	2,160,629	901,986	71.7
Net labor				
Florida	29,852	55,291	25,439	85.2
United States	904,190	1,523,886	619,696	68.5
Dividends, interest, and rent				
Florida	9,101	18,103	9,002	98.9
United States	176,145	342,503	166,358	94.4
Transfer payments				
Florida	8,280	15,299	7,019	84.8
United States	178,308	294,240	115,932	65.0

the 15-24 age group. Despite a hefty increase in transfer payments, the other components of personal income, primarily attributed to these groups, are offsetting the increase in transfer payments and actually lowering its impact on statewide personal income.

Northwest region

The northwest region experienced the lowest percentage increase in personal income among all other regions in Florida during the 1975-1980 period. The area's 71.3-percent increase was below the 87.8-percent growth rate statewide (see Table 3). Personal income rose from $3.6 billion to $6.1 billion; however, as a percentage of the state level, the northwest's share of 7.5 percent in 1975 fell to 6.9 percent in 1980. With a population growth rate of 7.6 percent between 1975 and 1980, this region had the lowest influx of residents. The per capita income increased 59.2 percent from $4,436 in 1975 to $7,063 in 1980, besting only the performance of the northeast (see Table 4). Per capita dollar amount was the least of all regions in Florida.

All counties within the region had increases in personal income below that of the state. Wakulla had the highest gain, 85.4 percent, while Jackson had the lowest percentage increase, 52.9 percent. Escambia, the most populous county, had a population increase of only 3.0 percent with transfer payments increasing by 88.1 percent during the same period, which was higher than the statewide

Table 3.—Personal income: Northwest region (millions)

Item	1975	1980	$ change	% change
Bay	403.2	718.7	315.5	78.2
Calhoun	30.1	47.1	17.0	56.5
Escambia	1,094.1	1,791.1	697.0	63.7
Franklin	21.3	36.7	15.4	72.3
Gadsden	129.4	207.1	77.7	60.0
Gulf	43.8	67.9	24.1	55.0
Holmes	41.0	73.6	32.6	79.5
Jackson	145.7	222.8	77.1	52.9
Jefferson	35.0	60.8	25.8	73.7
Leon	662.9	1,194.3	531.4	80.2
Liberty	11.6	20.2	8.6	74.1
Madison	54.3	92.3	38.0	70.0
Okaloosa	468.5	818.0	349.5	74.6
Santa Rosa	212.7	386.2	173.5	81.6
Taylor	64.9	111.6	46.7	72.0
Wakulla	29.5	54.7	25.2	85.4
Walton	61.4	108.7	47.3	77.0
Washington	45.4	78.5	33.1	72.9
Region total	3,554.8	6,090.3	2,535.5	71.3
Percent of state	7.5	6.9	---	---

Table 4.—Per capita income: Northwest region (dollars)

Item	1975	1980	$ change	% change
Bay	4,522	7,336	2,814	62.2
Calhoun	3,618	5,056	1,438	39.7
Escambia	4,810	7,641	2,831	58.9
Franklin	2,922	4,781	1,859	63.6
Gadsden	3,228	4,971	1,743	54.0
Gulf	4,223	6,355	2,132	50.5
Holmes	3,100	4,986	1,886	60.8
Jackson	3,760	5,676	1,916	51.0
Jefferson	3,619	5,665	2,046	56.5
Leon	5,173	8,015	2,842	54.9
Liberty	2,908	4,741	1,833	63.0
Madison	3,703	6,182	2,479	66.9
Okaloosa	4,441	7,413	2,972	66.9
Santa Rosa	4,414	6,881	2,467	55.9
Taylor	4,161	6,734	2,573	61.8
Wakulla	3,238	5,012	1,774	54.8
Walton	3,337	5,091	1,754	52.6
Washington	3,380	5,400	2,020	59.8
Region	4,436	7,063	2,627	59.2

rate. This increase in transfer payments occurred because 30 percent of the county's population increase came from the 65-and-older age group. Both Okaloosa and Madison counties had a 66.9-percent increase in per capita income, rising $2,972 and $2,479, respectively.

Northeast region

The northeast region performed only slightly better than the northwest, achieving a 71.8 percent gain in personal income over 1975-1980 (see Table 5). The area's increase is also below the statewide level. The northeast share of statewide personal income fell one point from 11.6 percent to 10.6 percent. Per capita income for the region improved by 57.0 percent over the 1975-1980 period, while at the same time, incurring a 9.3-percent increase in population. Both growth rates are below-average increases for the state, especially the per capita rate which was the lowest for all Florida regions (see Table 6).

Clay County had a region-leading 102.8 percent gain in personal income, and St. Johns, Marion and Levy counties had growth rates of 90 percent or more. Lafayette County's increase of 45.0 percent was the state's lowest gain during the 1975-1980 period. Duval County contributed 51.6 percent of the dollar growth in the region, which represents only a 63-percent increase over the county's 1975 level. Duval County's transfer payments was the fastest growing component of personal income, increasing 76.6 percent despite no significant change in population. Marion County had the highest percentage increase in per capita income, 60.6 percent, up $2,629 from the 1975 figure of $4,337 to a level of $6,966 in 1980.

Central region

The 93.6-percent growth rate of the central region, second only to the southwest region, is significantly above the statewide increase of 87.8 percent (see Table 7). This region increased its share of the state's personal income to 13.3 percent, up from 12.9 percent in 1975. The region's per capita income of $8,608 was below the state's level of $8,993 (see Table 8); however, the percentage increase from 1975 to 1980 was more favorable, increasing 66.1 percent, compared to 62.6 and 62.8 percent for the state and nation respectively. This performance was even more impressive when the population growth rate of 16.5 percent is considered.

Flagler County had the highest percentage gain in personal income (151.2 percent) in both the region and the state during the 1975-1980 period. Dividends, interest and rents, which previously contributed less to personal income as compared to transfer payments, had reversed that position by 1980. Personal income in Osceola and Seminole counties grew more than 110 percent, with four other counties achieving better than a 90 percent growth rate. Osceola also experienced a 74.9-percent increase in per capita income, which was the highest for the region.

Southwest region

Registering a 93.8-percent gain in personal income, the southwest had the highest growth rate of the state's regions (see Table 9). Personal income rose from $12.7 billion in 1975 to $24.5 billion in 1980, an increase of $11.8 billion. This growth rate was identical to the rate for the 1970-1975 period. The area's percentage of the state total increased from 26.8 percent to 27.7 percent by the end of 1980. The per capita income of $10,412 was the highest of all regions in 1980, and was an increase of 67.4 percent over 1975. Significantly, 36.6 percent of newcomers to the state, or those changing residence, relocated in the southwest. Per capita income increased by $4,194, from $6,218 in 1975 to $10,412 in 1980 (see Table 10).

Hernando County's 130.6-percent growth topped the other counties in the region, and was followed by Citrus, Charlotte and Pasco counties, with rates of 128.2 percent, 127.4 percent and 126.8 percent, respectively. Six counties had personal income gains of more than 120 percent. In absolute dollars, Pinellas and Hillsborough were the main contributors with $3.2 billion and $2.4 billion, respectively, accounting for 47.4 percent of the regional increase. Growth rates for personal income and population in both counties were below the state level. Manatee County's 75.1-percent increase in per capita income was the regional best.

Table 5.—Personal income: Northeast region (millions)

Item	1975	1980	$ change	% change
Alachua	608.5	1,070.3	461.8	75.9
Baker	43.6	79.3	35.7	81.9
Bradford	58.3	97.2	38.9	66.7
Clay	250.0	506.9	256.9	102.8
Columbia	128.7	229.7	101.0	78.5
Dixie	20.7	37.2	16.5	79.7
Duval	3,208.5	5,232.7	2,024.2	63.1
Gilchrist	21.6	37.4	15.8	73.1
Hamilton	33.9	52.6	18.7	55.2
Lafayette	12.9	18.8	5.9	45.7
Levy	59.3	112.8	53.5	90.2
Marion	432.5	855.2	422.7	97.7
Nassau	114.2	201.2	87.0	76.2
Putnam	173.0	299.5	126.5	73.1
St. Johns	197.3	393.5	196.2	99.4
Suwannee	78.8	127.2	48.4	61.4
Union	28.6	44.2	15.6	54.5
Region total	5,470.4	9,395.7	3,925.3	71.8
Percent of state	11.6	10.6	---	---

Table 6.—Per capita income: Northeast region (dollars)

Item	1975	1980	$ change	% change
Alachua	4,588	7,055	2,467	53.8
Baker	3,374	5,174	1,800	53.3
Bradford	3,369	4,843	1,474	43.8
Clay	4,992	7,543	2,551	51.1
Columbia	4,205	6,474	2,269	54.0
Dixie	3,118	4,793	1,675	53.7
Duval	5,743	9,141	3,398	59.2
Gilchrist	4,429	6,469	2,040	46.1
Hamilton	3,994	5,995	2,001	50.1
Lafayette	3,957	4,644	687	17.4
Levy	3,530	5,663	2,133	60.4
Marion	4,337	6,966	2,629	60.6
Nassau	3,986	6,104	2,118	53.1
Putnam	3,864	5,911	2,047	53.0
St. Johns	4,890	7,652	2,762	56.5
Suwannee	4,049	5,696	1,647	40.7
Union	2,888	4,338	1,450	50.2
Region	5,002	7,856	2,854	57.0

Table 7.—Personal income: Central region (millions)

Item	1975	1980	$ change	% change
Brevard	1,262.6	2,461.7	1,199.1	95.0
Flagler	32.0	80.4	48.4	151.2
Lake	451.2	880.5	429.3	95.1
Orange	2,440.0	4,534.9	2,094.9	85.9
Osceola	146.1	323.2	177.1	121.2
Seminole	612.6	1,312.9	700.3	114.3
Sumter	74.2	144.0	69.8	94.1
Volusia	1,079.8	2,070.6	990.8	91.8
Region total	6,098.5	11,808.2	5,709.7	93.6
Percent of state	12.9	13.3	---	---

Table 8.—Per capita income: Central region (dollars)

Item	1975	1980	$ change	% change
Brevard	5,234	8,998	3,764	71.9
Flagler	4,451	7,354	2,903	65.2
Lake	5,049	8,376	3,327	65.9
Orange	5,778	9,583	3,805	65.9
Osceola	3,738	6,541	2,803	75.0
Seminole	4,413	7,287	2,874	65.1
Sumter	3,533	5,918	2,385	67.5
Volusia	4,957	7,983	3,026	61.0
Region	5,181	8,608	3,427	66.1

Southeast region

In 1980, the southeast region accounted for 41.6 percent of the state's personal income, up from 41.2 percent in 1975. Over the period 1970-1975, and again in 1975-1980, this region, along with the central region, experienced increasing rates of personal income growth. The growth of $17.4 billion pushed the 1975 total of $19.4 billion to a high of $36.8 billion in 1980 (see Table 11). The 68.8-percent increase in per capita income in this area was the highest of any region in the state, and was significantly higher than the increase in the U.S. or Florida (see Table 12).

Martin County had the highest percentage increase in personal income of 133.1 percent, and was followed by St. Lucie, 119.4 percent,

Table 9.—Personal income: Southwest region (millions)

Item	1975	1980	$ change	% change
Charlotte	220.2	500.8	280.6	127.4
Citrus	148.3	338.4	190.1	128.2
Collier	407.7	910.9	503.2	123.4
De Soto	67.9	130.4	62.5	92.0
Hardee	72.1	140.5	68.4	94.9
Hernando	126.0	290.5	164.5	130.6
Highlands	175.9	353.8	177.9	101.1
Hillsborough	3,081.8	5,468.3	2,386.6	77.4
Lee	843.3	1,869.3	1,026.0	121.7
Manatee	644.2	1,329.1	684.9	106.3
Pasco	547.0	1,240.6	693.6	126.8
Pinellas	3,791.6	7,041.0	3,249.4	85.7
Polk	1,421.4	2,639.5	1,218.1	85.7
Sarasota	1,118.1	2,288.9	1,170.8	104.7
Region total	12,665.5	24,542.0	11,876.5	93.8
Percent of state	26.3	27.7	---	---

Table 10.—Per capita income: Southwest region (dollars)

Item	1975	1980	$ change	% change
Charlotte	5,028	8,452	3,424	68.1
Citrus	3,722	6,172	2,450	65.8
Collier	6,410	10,569	4,159	64.9
De Soto	3,915	6,831	2,916	74.5
Hardee	4,232	7,233	3,001	70.9
Hernando	4,084	6,518	2,434	59.6
Highlands	4,283	7,427	3,144	73.4
Hillsborough	5,195	8,412	3,217	61.9
Lee	5,444	9,086	3,642	66.9
Manatee	5,102	8,933	3,831	75.1
Pasco	3,875	6,376	2,501	64.5
Pinellas	5,740	9,643	3,903	68.0
Polk	4,998	8,186	3,188	63.8
Sarasota	6,874	11,287	4,413	64.2
Region	6,218	10,412	4,194	67.4

and Indian River, 118.1 percent. Five counties had increases of 100 percent or more. A noteworthy increase occurred in Palm Beach County, where personal income grew a whopping 115.1 percent from $3.1 billion to $6.7 billion during the period. The dollar growth of $3.6 billion was 20.5 percent of the regional gain. Dade County accounted for 43.9 percent of this growth, but in terms of percentage, only increased by 74.3 percent. Palm Beach County also had the highest per capita income increase in the state at 77.2 percent, an increase of $5,034 over the five-year period.

Table 11.—Personal income: Southeast region (millions)

Item	1975	1980	$ change	% change
Broward	5,544.5	10,932.4	5,387.9	97.2
Dade	9,486.0	16,529.4	7,043.4	74.3
Glades	16.6	27.0	10.4	62.7
Hendry	97.2	170.5	73.3	75.4
Indian River	273.0	595.4	322.4	118.1
Martin	270.1	629.6	359.5	133.1
Monroe	284.6	498.3	213.7	75.1
Okeechobee	60.6	123.8	63.2	104.3
Palm Beach	3,097.1	6,661.6	3,564.5	115.1
St. Lucie	314.2	689.3	375.1	119.4
Region total	19,443.9	36,857.3	17,413.4	89.6
Percent of state	41.2	41.6	---	---

Table 12.—Per capita income: Southeast region (dollars)

Item	1975	1980	$ change	% change
Broward	6,379	10,737	4,358	68.3
Dade	6,352	9,598	3,246	51.1
Glades	2,893	4,490	1,597	55.2
Hendry	6,444	9,149	2,705	42.0
Indian River	5,777	9,917	4,140	71.7
Martin	5,557	9,812	4,255	76.6
Monroe	4,668	7,812	3,144	67.4
Okeechobee	3,528	6,097	2,569	72.8
Palm Beach	6,520	11,554	5,034	77.2
St. Lucie	4,543	7,888	3,345	73.6
Region	5,236	8,840	3,604	68.8

Conclusion

The southern half of Florida continues to show more vibrant growth than the rest of the state. The contrasting make-up of the northern and southern regions facilitates this widening disparity. The south's growth is a result of an increasing number of manufacturing establishments now being located there. This growth is complemented by the revival of the tourist industry which is concentrated primarily in the central and southern regions. The northern regions, on the other hand, tend to concentrate around agricultural industries.

There is an obvious population swing away from the more-populated counties to nearby less-populated counties with some exceptions, such as Palm Beach and Orange. The five-year period from 1975-1980 was an improving period for the state when compared to the rest of the nation. Further population increases are expected and the distribution of this increase should continue to favor the 25-44 age group.

Sources of information

Articles from *Business and Economic Dimensions* are included in the listing of more than 2,300 separate works in the current annual **AUBER Bibliography** of the Association for University Business and Economic Research. The 294-page compilation (Volume XXVI) includes monographs and working papers not found in standard indexes as well as regional business reports, journals, conference reports, books and technical reports produced in 1981 by member institutions of AUBER and of the American Assembly of Collegiate Schools of Business (AACSB). The references are listed in three different ways: by subject, institution and author. The bibliography covers more than 125 subjects, with the largest number of entries in the categories of business and public administration, international business, marketing and advertising, regional economics, personnel management, and financial markets. The bibliography may be ordered from the West Virginia University Bookstore, Morgantown, WV 26506, prepaid at $15.00 with checks payable to AUBER-WVU. Orders from outside the U.S. should include an additional $2.00 for postage and handling. Limited quantities of the bibliography from previous years are also available.

Anyone interested in Florida's population, its current levels, future growth and the implications of growth for local government, will want to attend a seminar series sponsored by the Bureau of Economic and Business Research and Landmark Banks. The one-day seminars will be held this winter in the following cities: January 14, Fort Myers; January 28, Ft. Lauderdale; February 11, Tampa; February 25, Orlando; and March 4, Tallahassee.

The Bureau's Population Program is the source of official population estimates and projections for the State of Florida. Since the data generated by the Bureau are the basis for many crucial public and private decisions, it is important to understand how population estimates are formulated, what the implications of the estimates are for county and municipal funding, how future population levels are forecast, and what the implications of these estimates are.

The fee is $35, which includes a continental breakfast and lunch. Seminars will be held at the following locations:

Fort Myers: Sheraton Inn, 8900 Tamiami Trail, 813-936-4300
Fort Lauderdale: Holiday Inn North, I-95 at Commercial Blvd., 305-776-4880
Tampa: Holiday Inn Airport, 4500 W. Cypress, 813-479-4800
Orlando: Holiday Inn, 6515 International Drive, 305-351-3500
Tallahassee: Holiday Inn Downtown, 316 W. Tennessee, 904-222-8000

To register, please make your check payable to Landmark Banks and mail to Population Seminar Series, Bureau of Economic and Business Research, 221 Matherly Hall, University of Florida, Gainesville, FL 32611. Be sure to indicate the location you wish to be registered for.

Conferences will be cancelled if there is insufficient registration one week prior to the conference date. For further information, please call (904) 392-0171.

Index to Volume 18, 1982

The 1982 Economic Forecast, no. 1, 1982

Florida looks ahead to better times
Governor Bob Graham
pp. 2-7

The 1982 national economic outlook
Allan Meltzer
pp. 8-15

Examining the nation's economy for 1982
Lawrence Chimerine
pp. 16-21

What's ahead for Florida's financial industry?
A current perspective: Joel R. Wells, Jr.
Insurance: W. Ashley Verlander
Commercial Banking: Howard W. Nix, Jr.
Savings and Loans: Raleigh Greene
Looking to the future: Charles J. Zwick
pp. 22-27

The 1982 national economic outlook
Hank Fishkind
pp. 28-32

Southeast Florida: A Regional Profile, no. 2, 1982

Southeast Florida: a regional profile
Neil G. Sipe
Jay Stannard
Pamela Schenker
pp. 2-21

The crisis in water management in South Florida
Arthur R. Marshall
pp. 22-27

Water management and the rain machine conjecture
James P. Heaney
pp. 28-32

Water management for drought and flood control
Margaret Yansura
pp. 33-36

Florida's Changing Population, no. 3, 1982

Florida in the 20th century: a survey of demographic change
Stanley K. Smith
pp. 2-8

A profile of Florida's population
Stanley K. Smith
pp. 9-12

Florida's counties follow statewide growth trends
Marylou Mandell
pp. 13-18

The impact of older people on Florida's economy
Carter C. Osterbind
pp. 19-24

Florida's foreign-born population: a growing influence on our economy
Clyde B. McCoy
Diana H. Gonzalez
pp. 25-36

Employment and Income in Florida, no. 4, 1982

An overview of income and employment in Florida and the Southeast
Hank Fishkind
pp. 2-4

Employment growth in Florida and the Nation: 1976-1981
Asif Hassan Merchant
pp. 5-16

Trends in personal income for Florida and the Nation since 1975
Harold Smith
pp. 17-25

Publications of interest from the . . .

Bureau of Economic and Business Research

Annual

Florida Statistical Abstract . . .	over 700 pages of current and historical data about the economy and demography of the state, counties, and metropolitan areas of Florida. **1982 edition now available.**
Florida Estimates of Population . . .	annual intercensal estimates of the population of Florida, its counties, municipalities, and unincorporated areas.

Quarterly

The Florida Outlook . . .	detailed quarterly forecasts for Florida's economy, incisive analyses of economic developments in Florida and the nation, and the outlook for Florida's major urban areas. Available by subscription only.
Business and Economic Dimensions . . .	recent and coming issues include Florida Regional Profiles, Population Analyses, Employment and Income Studies, and Annual Economic Outlooks.

Monthly

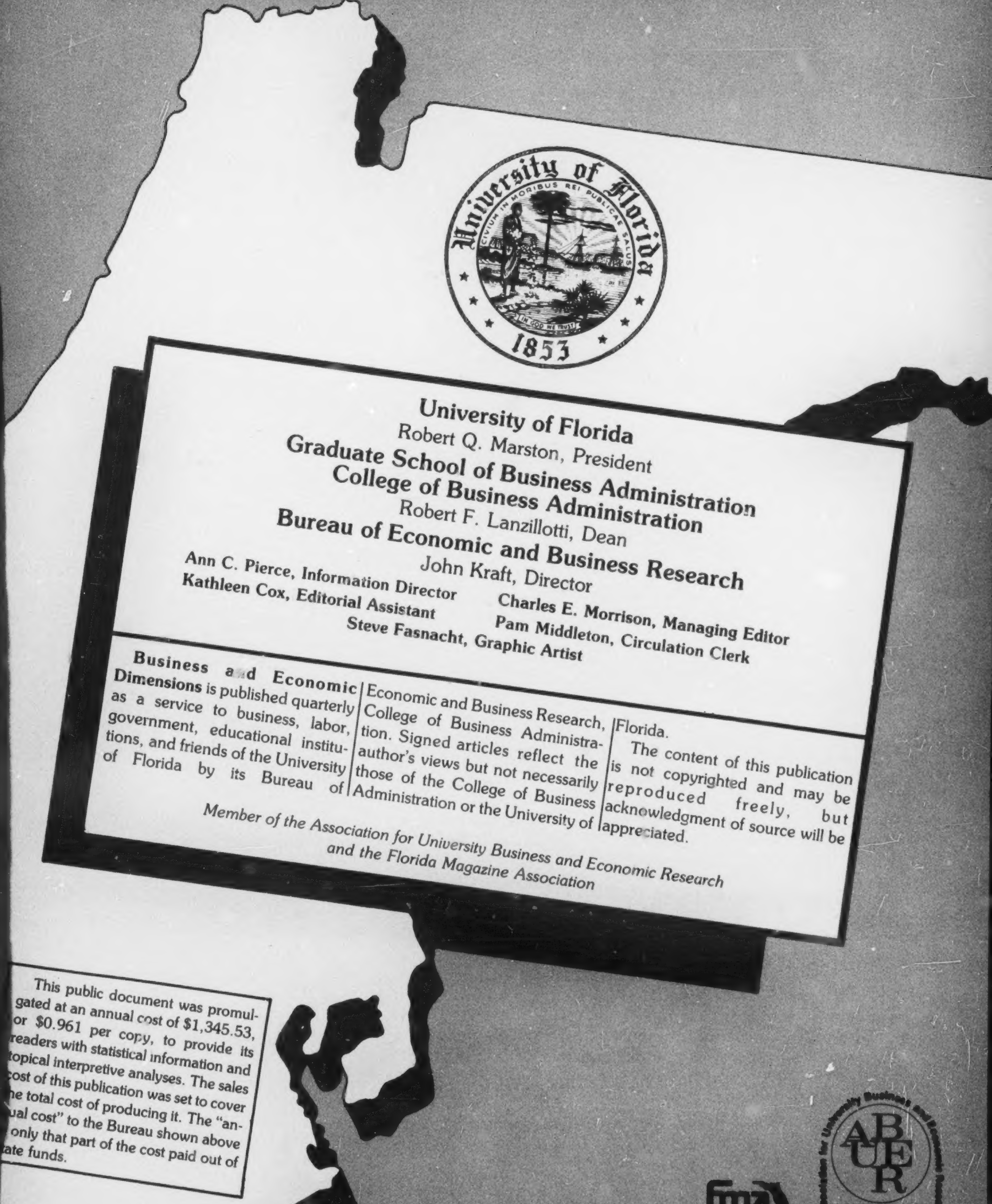
Building Permit Activity in Florida . . .	monthly compilations of permits issued in the state, counties, cities, and unincorporated areas of Florida.
Economic Leaflets . . .	analyses and background on state and regional economic and business topics, written for the layman with an interest in economic and business trends and the impact of public policy on the economy.

Irregular

Population Studies . . .	bulletins providing information on population estimation; projections by county; age, race and sex estimates of county population; and household number and size in the state.
Special publications . . .	have included *Benefit Measures of Air Quality Regulation in Florida; The Urbanization of Florida's Population: An Historical Perspective of County Growth 1830-1970;* and the annual series of *Florida Forecasts,* produced for the Florida Council of 100.

For more information about ongoing economic, demographic, and forecasting research, about project consulting, and about Bureau publications, please write or call:

Bureau of Economic and Business Research
221 Matherly Hall
University of Florida
Gainesville, Florida 32611
904/392-0171



University of Florida
Robert Q. Marston, President
Graduate School of Business Administration
College of Business Administration
Robert F. Lanzillotti, Dean
Bureau of Economic and Business Research
John Kraft, Director
Ann C. Pierce, Information Director
Kathleen Cox, Editorial Assistant
Charles E. Morrison, Managing Editor
Pam Middleton, Circulation Clerk
Steve Fasnacht, Graphic Artist

Business and Economic Dimensions is published quarterly as a service to business, labor, government, educational institutions, and friends of the University of Florida by its Bureau of Economic and Business Research, College of Business Administration. Signed articles reflect the author's views but not necessarily those of the College of Business Administration or the University of Florida.

The content of this publication is not copyrighted and may be reproduced freely, but acknowledgment of source will be appreciated.

Member of the Association for University Business and Economic Research and the Florida Magazine Association

This public document was promul-
gated at an annual cost of $1,345.53,
or $0.961 per copy, to provide its
readers with statistical information and
topical interpretive analyses. The sales
cost of this publication was set to cover
he total cost of producing it. The "an-
ual cost" to the Bureau shown above
only that part of the cost paid out of
ate funds.

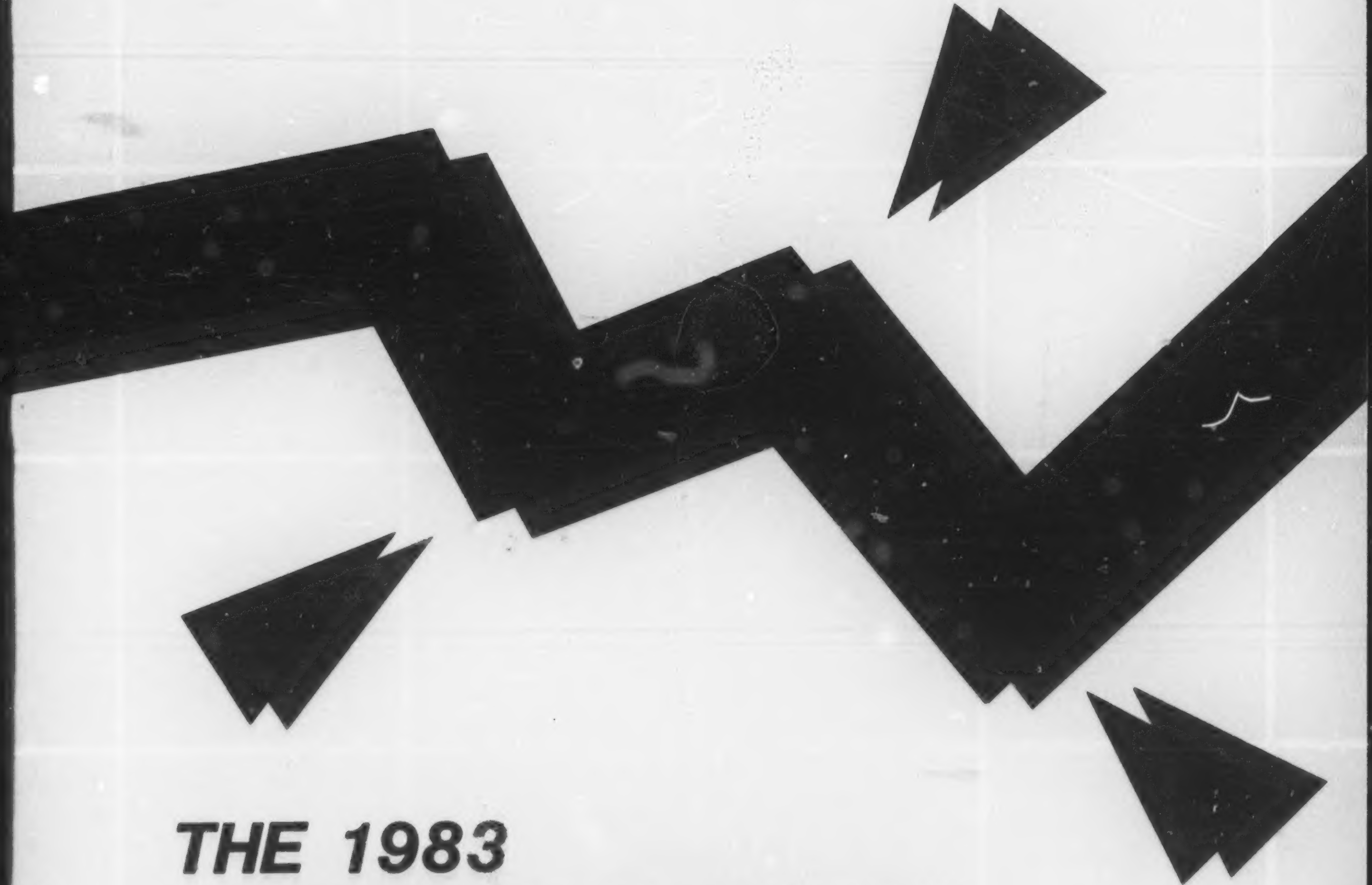
MEMBER

4/8/83 U6660-2 A

ISSN 0007-6457

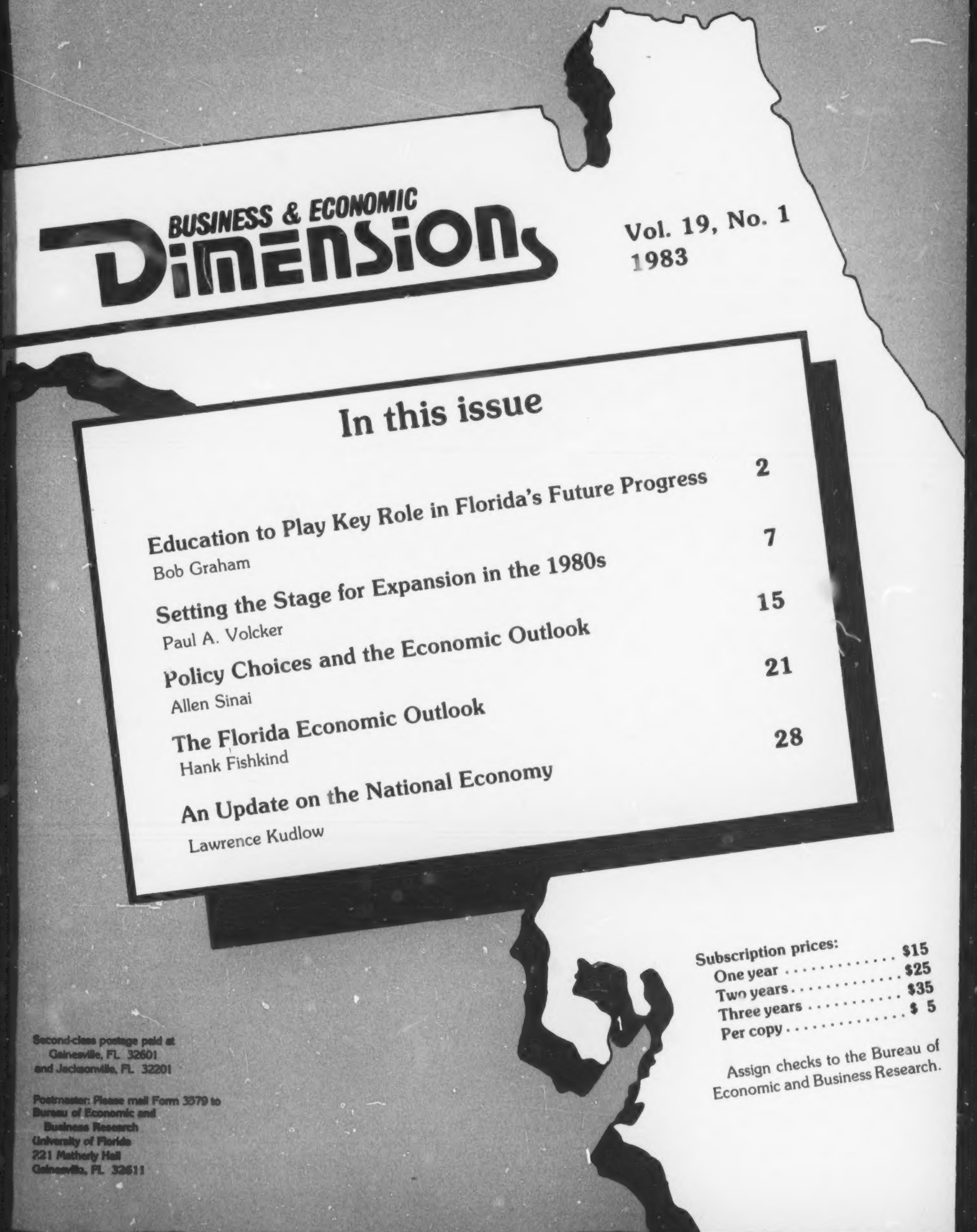
BUSINESS & ECONOMIC DIMENSIONS

I-1983



THE 1983 ECONOMIC FORECAST

BEST AVAILABLE COPY



BUSINESS & ECONOMIC
DIMENSION

Vol. 19, No. 1
1983

In this issue

Education to Play Key Role in Florida's Future Progress 2
Bob Graham

Setting the Stage for Expansion in the 1980s 7
Paul A. Volcker

Policy Choices and the Economic Outlook 15
Allen Sinai

The Florida Economic Outlook 21
Hank Fishkind

An Update on the National Economy 28
Lawrence Kudlow

Subscription prices: $15
One year $25
Two years $35
Three years . . . . $ 5
Per copy . . . .

Assign checks to the Bureau of
Economic and Business Research.

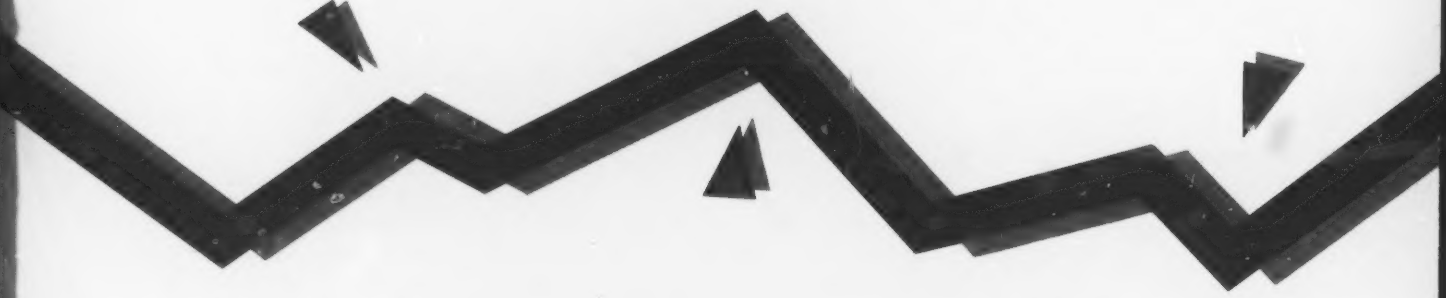
Second-class postage paid at
Gainesville, FL 32601
and Jacksonville, FL 32201

Postmaster: Please mail Form 3579 to
Bureau of Economic and
Business Research
University of Florida
221 Matherly Hall
Gainesville, FL 32611

INTROGRAM

In the economic policy-making process, choices are made which have a direct impact on the current and future direction of our economic performance. At this year's Florida Economic Outlook Conference held recently in Tampa, five distinguished speakers gave their individual analyses of the economic policy choices made in the past and those that need to be addressed in the future. This issue of *Dimensions* is devoted to a report of the highlights of the conference proceedings.

In remarks which opened the conference, Governor Bob Graham advocates improvement in the state's educational system as the key point in his scenario for economic progress in Florida. In the conference's keynote address, Paul A. Volcker, chairman of the Federal Reserve System's Board of Governors, gives a cautiously optimistic assessment of the economic prospects for 1983 and beyond. In another major address, Dr. Allen Sinai, senior vice president of Data Resources, Inc., maintains that the policy choices of the past few years are responsible for today's economic situation, and that today's policy choices will directly influence future patterns of economic recovery and expansion. From the Reagan administration perspective, Lawrence Kudlow, associate director of the Office of Management and Budget, provides an update on the state of the national economy. Finally, Hank Fishkind, associate director of the University of Florida's Bureau of Economic and Business Research, details the Bureau staff's annual forecast for the Florida economy.



Education to Play Key Role in Florida's Future Progress

Excerpts from a speech by:
Bob Graham

Governor
State of Florida

The role of government ought to be in creating an environment that encourages appropriate economic development but allows the marketplace to decide the specifics which will occur within that environment. That is what we have been about for the past several years in Florida, and what I hope we will continue to do in the future.

Our basic thrust for the last five years has been to use the work of the Council of 100 with a report which did a physician's diagnosis of what the problem was with the economy of Florida. Why was it that for a decade our state lagged substantially behind the nation, and particularly, why did we lag behind the southeastern region in job creation, capital investment and other indices of economic progress? Essentially, the report identified obstacles which had been erected that made us a less desirable place to invest. We have been removing those obstacles to allow the energy of unrestrained choice to operate for our benefit, and I think that we have received some substantial benefits through that process. Last year, our state was selected by Alexander Grant & Company as the state with the best climate for job creation in the country.

One of the things that Lieutenant Governor Wayne Mixon has been doing for the last four years, and what his new position as Secretary of Commerce will allow him to do, is to underscore that economic development in terms of state policy is not the exclusive province of any one area of state government. It is an activity in which all of the major actors—the Department of Transportation, the environmental agencies, educational agencies and others—need to feel a common sense of commitment. It is that sense of total commitment which has been a significant part of the leadership that the Lieutenant Governor has brought to this effort. It also underscores that we tend to deal with these various components of state activities in separate boxes because it is convenient to think of them in that way. But in reality, they are very much interlaced in terms of the strategic goals that we have for Florida.

We want to have the strongest possible economic base through a diversification which will maintain the strengths of our traditional sectors such as tourism, agriculture and construction, but will add new areas, particularly in the high-technology and international commercial field. We want to have a system of economics in which all Floridians can share and participate in our prosperity. We cannot become a state polarized between those few who are participating in the expanding prosperity of our state, and between a large pool of people who have been left behind because they don't have the skills to participate.

Education is a key to growth

Education is going to play a central role in the next period of our state's economic development. We cannot achieve the next level of prosperity by just passively letting people know that there are no obstacles to activity in Florida. We need to make a strategic commitment to an overall enhancement of the level of our education.

Our goal for the next four years is to move fully into the fields of international commerce and high technology. It is our goal, in the field of high technology, to add 45,000 jobs within our state in the next four years. To do this, we need to help existing international and high-technology industries expand and attract new ones to this state. We will all benefit from the explosion of new knowledge that creates new products, new markets and new jobs. However, we will benefit from these new developments only if we are prepared for them, and only if our work force is ready for the new jobs and industries that are beginning to emerge in communications, electronics, fiberoptics and microprocessors. In achieving our full potential as the bridge that connects the continents of the world, there is only one way that we can position our work force for the future, and that is through education.

The state has a firm commitment to bring Florida's educational system into the upper quartile of the nation. By 1986, we will be in the top twelve states of America as measured by the educational attainment of our students and by the resources committed to education. We will stiffen our requirements for graduation so that a high school diploma, or a degree from an institution of higher learning, will increasingly be a mark of significant academic achievement. We will insist on literacy not only in English. Florida's business is now increasingly the world's business, and it will become an increasingly international state. Knowing another language is less a luxury and more a necessity for full participation.

Our mathematics and science curriculum must be strengthened. One of the measures of how far we must go as a nation is in the calculus gap. Last year, the Soviet Union, in all of its high-school equivalents, had a total of 5,000,000 students studying calculus. Last year, the United States, in all of its high schools, had 100,000 students enrolled in calculus. That is a fifty-to-one differential in an absolutely fundamental building block toward a high-technology economy, and we cannot as a nation tolerate that gap.

We in Florida have our own special problems. Next year, we will graduate students from our public and private colleges and universities in a variety of disciplines. We'll graduate 5 certified to teach middle school math, 5 to teach chemistry, 2 to teach physics and 336 to teach physical education. No one can deny the benefits of physical fitness, but our ability to train tomorrow's work force simply must match the skills that the Florida work force will need in the 1990s. Florida's situation is not unlike the situation in which America found itself in the late 1950s when the Russians launched the first Sputnik and opened the race for space exploration. To meet that challenge as a nation and as a state, we will retool our work places and our work forces.

High-tech economy is competitive

We helped our citizens develop new skills for a new world. Now we are involved in a competition that is just as intense as in the 1950s, but it is more subtle. Now, the competition is not to land an astronaut on the moon but to stay a jump ahead in the software for computers that have not yet been invented. The opportunities in the 1990s and beyond will not be uniformly distributed.

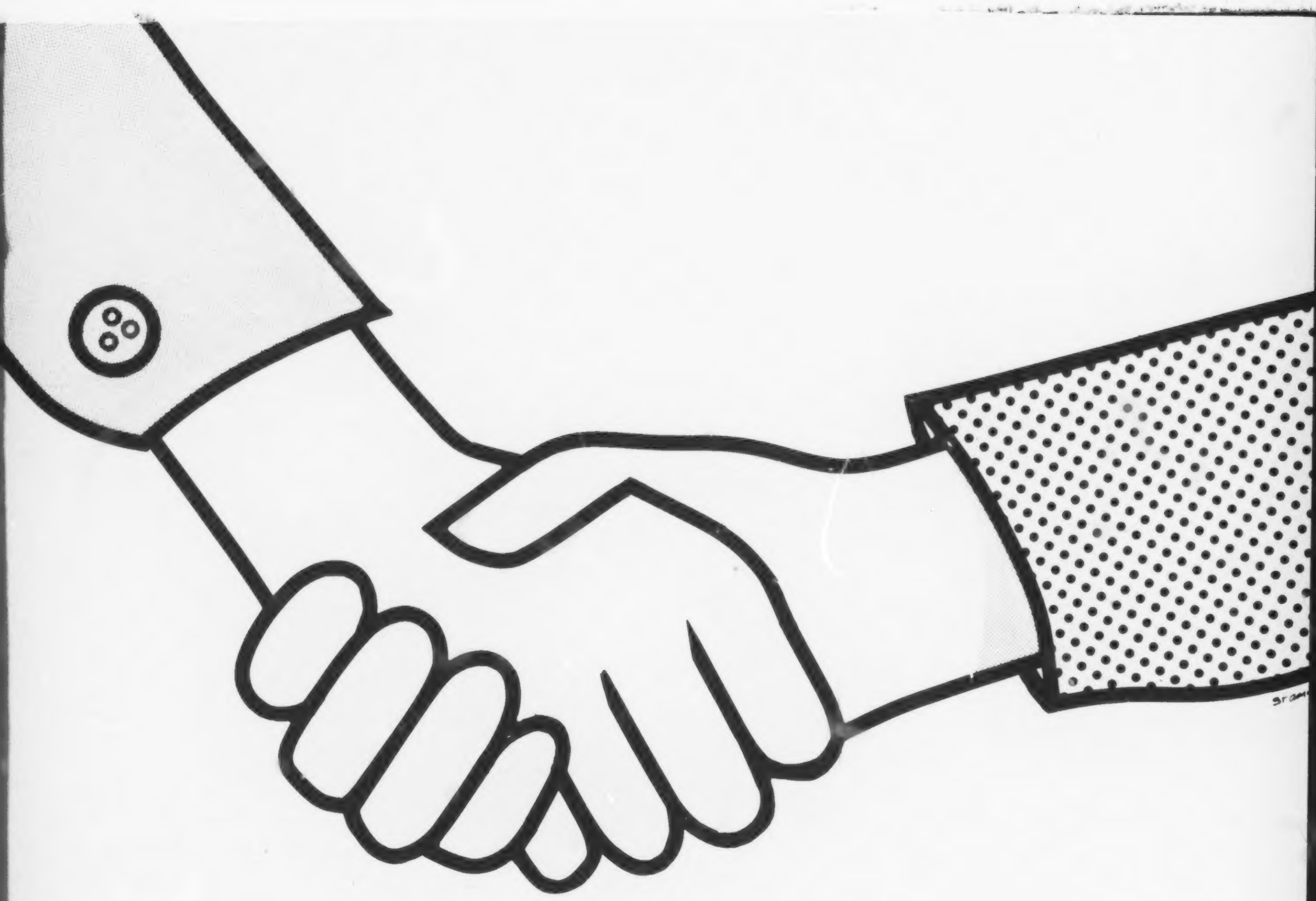
We are also in a competition with other states to see where those opportunities will land. I am convinced that we are in the process of settling where the major economic growth of America will occur in the next twenty-five years. One state or a small group of states, most likely one in a small group of Sunbelt states, will soon begin to outshine the others in their ability to compete effectively. I want our state to be part of that group of leadership. Even in the depths of this recession, we see that those states which have made a serious commitment to high-technology industry are the ones that have demonstrated the greatest ability to survive.

Massachusetts is an island of prosperity in a sea of northeastern distress largely because it has made the effort to build a strong, high-technology economy around great higher educational institutions. To seize those opportunities, we must become more competitive. What we are doing today is frankly not sufficient. In 1981, Florida ranked thirty-eighth among the states on the SAT test verbal examination, and thirty-ninth in mathematics. We ranked thirty-first among the fifty states in the number of students honored in the National Merit Scholars Program. To reverse this trend, we must improve the quality of instruction in mathematics and science. We must have more and better teachers, with up-to-date experience in the real world of work.

Business-education partnership a key

To achieve this goal, we need a meaningful partnership between education and private business. What are some of the specifics of that partnership? We need cooperation to employ our high school and junior college mathematics and science teachers in the summer, exposing them to industry, and in return, receiving their fresh input to business. Business will be making an investment in quality education, and will earn a return in the form of a refreshed, more enthusiastic teacher and better-prepared students.

We need business to loan their personnel to our educational institutions for a semester or an academic year for one hour a day, or whatever is appropriate to help our schools



retool. We cannot wait the five or ten years that will be necessary to move from the point that we're training two physics teachers a year to the level required to enhance the teaching of science in our classrooms. We need to immediately seize upon a new pool of people who can assist us in making an immediate positive impact on science and math in our high schools.

As we present our legislative agenda this year, you will learn more about the opportunities that private business will have to make an investment in quality education. We need your work places. I am firmly convinced that the most appropriate place to learn a job skill is in the same environment in which that skill is going to be practiced. There is a great disharmony in training people in a classroom setting outside the culture of the work place, or outside the area in which they are likely to be exposed to the state-of-the-art technology.

Is GENESYS program a solution?

Even more directly, you can participate in the new job-training partnership. This new federal program, which completely replaces the old CETA program, involves government and industry in targeting goals and matching jobs to skills. With these new programs, Florida will provide a highly trained and motivated labor pool. But what about five years down the road? We have another major challenge at the next level of educational attainment, which is: How do we make Florida an attractive place for the engineers and scientists who have been trained around the world to practice their profession? How do we provide them with the means of maintaining their skills in a highly dynamic and changing technological world? Already in place is a pace-setting program called GENESYS 2, which stands for Graduate Engineering

Educational System. It is working today at Pratt and Whitney in Palm Beach County and at the Harris Corporation in Melbourne. I have directed the Board of Regents to develop a central coordinating staff to make these services available throughout the state, and to have a single telephone number which businesses in Florida can contact to secure information and assistance.

In this program, students in small classes at their own work places are earning advanced degrees from Florida's state universities. They watch a videotape lecture from a university school of engineering with a company tutor. They take exactly the same courses as the students on campus, running about a week behind. When a student in the taped class session asks a question, the tutor stops the tape and facilitates a classroom discussion. When the employees complete their discussion, the tutor turns the tape back on and the students hear what their videotaped counterparts had to say. Obviously, getting two opportunities for discussion pays off. The students enrolled at Harris and Pratt and Whitney are outperforming the engineering students in the on-campus program. They take the same tests, do the same study and are getting better grades.

It costs sponsoring businesses $2,400 per semester for access to the videotapes. They keep them for a month and show them as many times as they wish. Every major state university is now participating in this cooperative program, and it's available wherever a business is located in Florida.

One of the legitimate criticisms of what has happened in California is that there has been a tremendous concentration of high technology in one geographic area. There is now a heavy price being paid for that concentration in terms of overstress on the manpower pool, and tremendously inflated real estate costs for housing and industrial locations. I believe that one of the strategic objectives of growth management in Florida should be a dispersal of our new, high-technology industry. We can legitimately talk about six to eight centers that will have the necessary core of activity to support a high-technology center. An absolute key to being able to do that is to provide the educational services which are the backbone of a science-based new industry in a dispersed pattern to meet the needs of a dispersed industry.

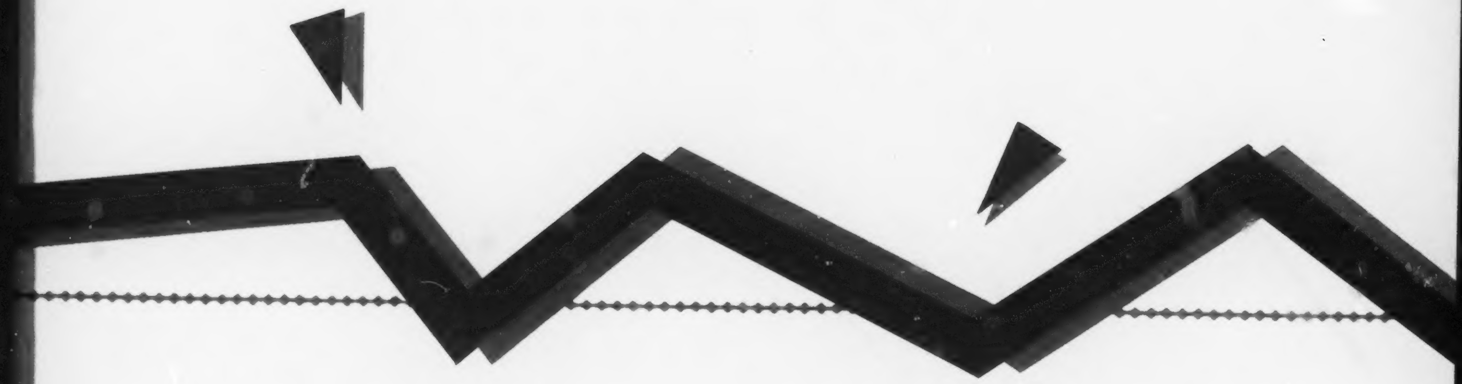
Educational inducements essential

In our budget for the next fiscal year and beyond, we are going to propose scholarships for education students who promise to teach math and science in our public schools. We'll pay tuition and a stipend in exchange for a commitment to teaching. If students fail to teach as they're required, then they will pay back the awards at the prevailing interest rate. We need adjunct math and science faculty for schools where vacancies persist. This program will help to tap the talents of Floridians such as scientists and engineers who are educated in math and science, but are not now involved in teaching. It will depend on employers to help us make this program a reality.

We need funding to allow math and science teachers to remain after school for additional time to tutor gifted and promising students. We need to extend the learning program to update the training of our present math and science teachers at fulltime, live-in programs at our major state universities during the summer. Substantive course work in math and science, and not in educational methodology, is the objective.

We need an enrichment program for summer school in math and science. This is not a remedial program but a special educational experience for our superior students, encouraging them to explore challenging areas. These are educational initiatives that relate directly to Florida's economic future. If our citizens are prepared for jobs in high-technology industry, then those industries will find Florida even more attractive. We have worked together with the Council of 100 to create a business climate which is now listed as the best in the nation. Many factors produced that distinction: our quality of life, tax system, physical plant, weather and beaches; but nothing will shape our economic development program for the next period more than our commitment to education. We have turned the corner toward rising educational quality, and there is a strong commitment by the people of this state to achieve this objective. We have redirected our priorities toward the job market of the 1990s and beyond.

All the elements for success in that endeavor are now in place. Let us proceed to make it a reality.



Setting the Stage for Expansion in the 1980s

Excerpts from a speech by:

Paul A. Volcker

Chairman
Board of Governors
Federal Reserve System

This Florida Economic Seminar is meeting at an interesting time. As you know, the country has been mired in recession. It's the longest and by some measures, particularly unemployment, the deepest of the recessions of the postwar period. Florida has a strong growth trend and a relative lack of the so-called "smokestack industries," and has been better off than some parts of the country; however, I know that you've felt the effects along with other states.

When I say that unemployment is way too high and that many businesses are hard pressed to maintain profitability and that there is a sense of caution and uncertainty in the air, all those things apply to Florida as well as to the nation. However, we now see some signs that the recessionary forces are dissipating. I think that's true in Florida as well as elsewhere. Housing starts are up, and car sales recently have been doing a little better. Both of those sectors of the economy and others are being helped by lower interest rates. Stock prices seem to reflect a little better feeling. We have inventories in pretty good shape and that may help the overall business picture.

Slow recovery seen

It's too soon to say that the tide has definitely turned; we've been fooled before. However, there are strong reasons to believe that recovery may now or soon be upon us, even if it is likely to be slower than some earlier postwar recoveries. We still have some sectors of the economy declining, particularly true in business investment and exports. So while it may still be a bit of a mixed picture in the very short run, there are signs of improvement that are becoming more apparent.

The basic point is that whether or not the economic historians label January as the first month of recovery, we have come a long way during this troubled period toward setting the stage for a long-period expansion during the 1980s, an expansion that can combine the growth, employment and higher incomes we all want and need with much greater price stability.

That may sound odd in the midst of recession, so let me give a bit of my reasoning. If we cast our eyes backward to the seventies, or going back even longer to the mid-sixties, the economy has been characterized by inflation at an accelerating rate of speed until recently. It has been characterized by lower growth in productivity, until by the end of the 1970s, it was hard to see any improvement in the productivity figures. It has been characterized on a kind of trend basis by rising unemployment. In the textbooks, you're not supposed to have rising inflation and growing unemployment at the same time. They all concede that one or the other can happen, but not both. However, somehow we managed on a trend basis to have both higher inflation and a trend toward growing unemployment. In my view, those two things went together: the unsatisfactory elements in each fed on each other.

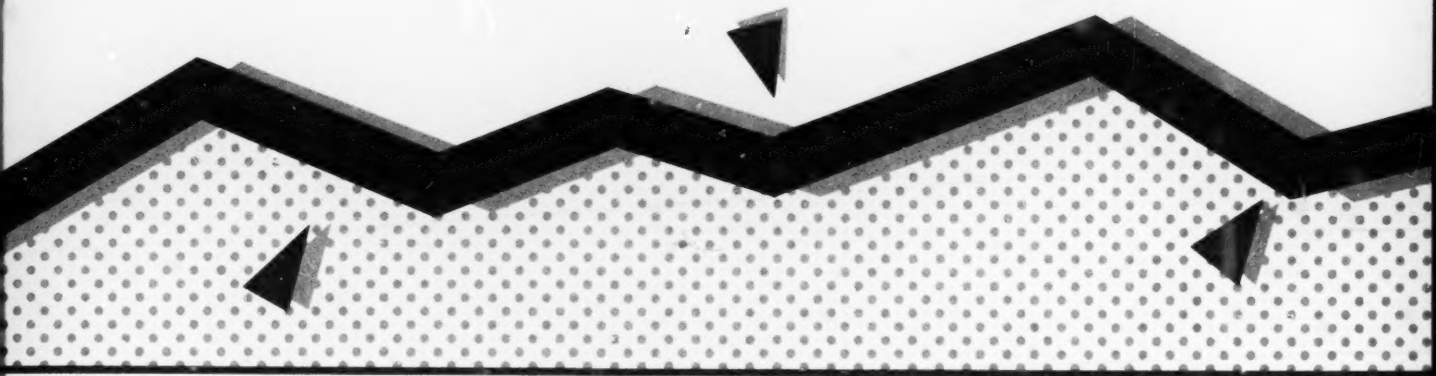
Inflation picture improving

Over the past couple of years, we have made considerable progress in reversing the inflationary tide. I know that some of the gains reflected in last year's Consumer Price Index increase of less than 4 percent are temporary. I know there is still a lot of skepticism after those fifteen years of inflation, as to whether we can continue to make improvement. I don't want to exaggerate the progress, but I also sense that there is real improvement. At this stage, this inflationary process has some momentum of its own, and there are good reasons to think that it can continue. We see in the past year a declining trend in the increase in wage and salaries in dollar terms, combined with some improvement in real terms, which is what really counts. This process has a little bit of momentum to it, of course, helped by the fact that we are still in the midst of recession.

Equally important in looking at the inflation outlook, for the first time in many years we see some solid signs that productivity is improving. Usually, productivity declines during a recession. In contrast to most recessions, productivity has actually increased in 1982. What you normally expect to find during a period of recovery are more rapid increases in productivity, and if we can manage increases during a period of recession, the omens are particularly good for a period of recovery. A declining rate of increase in wage and salary payments and the prospect of stronger productivity add up to a lower trend in unit-labor costs. Labor costs are two-thirds or more of all costs in the economy, and if we could keep that momentum going, we have laid the base for continuing improvement over time in the inflation rate.

I recognize that as recovery proceeds, some commodity prices could rise from what are now abnormally depressed levels, but we also know that overall supplies are ample in these basic commodities. We do not face, it would appear, the prospect of any early increase in the oil price, quite unlike the decade of the seventies. Indeed, the discussion is all in the other direction as to whether those prices may fall. So, I see no reason why we could not continue to make progress against inflation as recovery takes hold, and it will also breed an atmosphere in which we make further gains in that respect.

It is the continuing progress against inflation that can help set the stage for further progress toward lower interest rates, and that process will help keep the recovery going and contribute to the longer period of expansion that I would look forward to. That's a very oversimplified view of the future, but it is of central importance that some of the fundamentals are changing during this period of great difficulty in the economy.



In the 1970s, we seemed to have a vicious cycle at work; inflation feeding upon itself, productivity declining partly because of the difficulties with inflation, and unemployment rising. I remind you that our economy can have a more virtuous cycle as well, where growth and stability go together and help support the continuation of expansion and progress against inflation.

It may sound peculiar after the difficulties of the economy in the past ten or fifteen years, but that's the way an economy is supposed to work. That's the way the American economy did work, for instance, in the first half of the 1960s. My own conviction is that unless we're successful in achieving both growth and stability, we risk losing both of them.

Requirements for recovery

I don't think we can grow at the expense of throwing away the gains on inflation, or maintain the gains on inflation on the base of continuing recession and high unemployment. Now, if that is going to be true, let me suggest that there are several central requirements of economic policy and economic behavior.

First, it requires a sense of discipline by labor and management alike in restraining costs and prices. The recession is a powerful influence in that direction, but we simply cannot tolerate a situation in which recession continues to provide a part of the base for stability.

Secondly, if there's going to be discipline in the private sector, there has to be a sense of discipline in government policy, and that implies avoiding excessive money and credit growth and avoiding overly large federal deficits.

Finally, I think it's clear that prosperity and stability in the United States require reasonable stability in the world economy and an open world economy. The last point is at least as relevant to Florida as elsewhere, given your increasing dependence upon exports, and the vulnerability of the marketing of your crops and products to import restrictions abroad. The growth of the Port of Tampa says enough about your dependence on international forces.

International debt a problem

In fact, the financial and trade ties of Florida to Latin America point up one of the threats to our prosperity—the international credit crisis or debt crisis. There's no doubt that the indebtedness of many foreign countries, particularly developing countries, has been growing at an unsustainable rate for a decade or so, really beginning with the first oil crisis. It's been unsustainable in terms of the growth rate from the standpoint of the borrower that has been caught up in borrowing more and more money to, in effect, pay the increasing interest bill on the debts acquired earlier. It's unsustainable from the standpoint of the lenders, mostly the commercial banks. The major commercial banks of the United States and other countries have found their foreign exposure rising over time, related to their own growth and assets and capital.

In the past few years, that situation has been aggravated by high interest rates. It was rather nice for a while to have your debts increase, to pay relatively low interest that really didn't offset the inflationary forces in the economy, so that you found a real burden of rapidly rising debt increasing only slowly or not at all. However, all that changed when interest rates moved higher, and was further aggravated by recession in the world economy and by the understandable reluctance of the borrowing countries to take measures at home to curtail their reliance on foreign borrowing. These things are never particularly predictable in terms of their timing. A situation that had gradually become unsustainable came to a point of real difficulty this year when a few borrowers ran into clear difficulty in servicing their debt.

The situation with Mexico was the clear case in point, it having reached the status of being the world's largest single-country borrower internationally. As that difficulty became exposed, there was some danger that those who had been lending to Mexico and other countries all, in effect, ran for the exit doors together. If lenders stop lending abruptly, it is certain that crisis will be precipitated for the borrower in maintaining equilibrium. It's equally true that problems will be precipitated for the lenders themselves if the borrowers are unable to service their debt. We had some flavor of that situation arising during the summer and fall. It's a situation that's quite clearly in no one's interest, and needs to be addressed.

A fundamental part of the solution certainly needs to be what economists euphemistically call adjustment by the borrowing country itself; adjustment that can reduce the dependence of the borrower on external indebtedness. "Adjustment" means in practice all those difficult measures for any country, including the United States, to cut budget deficits, restrain growth in the money supply, encourage investment and enhance productivity. It's a tough process that takes time but is basic to any solution.

Even if that is done, there is no question that for the major international borrowers, lending must be maintained for some transitional period. It is simply not feasible that they can adjust so rapidly that they can wean themselves from external borrowing immediately and proceed upon paying, on a net basis, debts already incurred. I think there is a high level of understanding that both those elements are necessary to a solution of the problem: adjustment and some continuation of transitional lending. Of course, it's one thing to have an understanding of the nature of the problem and the directions in which a solution must take place, but the cures are not automatic.

Progress seen on international debt

At this point, we can happily see considerable progress being made. Notably, the major borrowers, most particularly in Latin America—Mexico, Brazil, Argentina, Chile and others—are working with the International Monetary Fund to achieve an internationally agreed adjustment program. That program carries with it, under the auspices of the IMF, a limited amount of official financing provided again by the IMF. Various governments around the world, including the United States, have also provided some transitional short-term financing. Finally, there's been a higher degree of cooperation among the major banks and this involves, in some cases,

I M F
world credit card
552 3789 6317 7153

more than a thousand banks around the world. This is not an American problem and not just a developing-country problem; it's a problem affecting every lending country of the world. Against that background, it's not very easy to arrange coordinated lending programs. However, we have seen examples in Mexico, currently in Brazil, and in Argentina where a lending program is pretty much in place, of cooperation among banks to provide a smaller amount of credit; nonetheless, the credit that's necessary to see these countries over a transitional period.

My conclusion is that the problem is a serious one, and that the situation against that background can and is being managed. I don't want to suggest that it's over. One aspect of the solution is that the International Monetary Fund must play a key role, and there's a very heavy burden on that institution. Discussion of the enlargement of the resources of that fund had been taking place earlier, and that problem becomes more urgent under current circumstances. Proposals will be made to the Congress shortly to increase the resources of the International Monetary Fund—to increase its quota, which is bound to be a controversial matter at this point in the Congress. However, controversial or not, to me it seems critically important in providing and maintaining the tools necessary to deal with this problem.

An ultimate solution to this problem, like so many others, is ultimately dependent upon growth in the major economies of the world, most of all in the United States because we have to provide import markets for other countries. It is also dependent upon maintenance of open markets so that our own trading system and our own country can flourish. There has to be a continuing recognition of the dependence that we all have, including this country, on open markets internationally.

The federal deficit threat

The second threat to this happy prospect of a growing economy in the 1980s lies much more directly at home, but it has some of the same characteristics. Of course, I'm thinking of the problem looming ahead of these enormous federal deficits. Of course, when one is looking at the budget for years ahead, the reality is that any budgetary projection doesn't approach the mathematical precision we mentally associate with a computer printout, even though most of those projections do take that form. Don't mistake the preciseness of the figures with the preciseness of the analysis. But with that qualification, the general magnitudes involved in this situation are real enough. The deficit for the current fiscal year is generally estimated in the neighborhood of $175 to $200 billion. It's too late and it's probably undesirable to do much about that current deficit.

What is a much larger problem is that the budget outcome is going to remain in that general range or higher as far ahead as one can see, given present programs and assuming healthy and prolonged economic growth. My thesis is that deficits of around 20 to 25 percent of spending and 5 percent or more of the total GNP are unacceptably large in a growing economy. The absence of timely action to reduce those deficits as the economy grows raises a most serious question as to whether the economic expansion we want can be sustained for long.

During the 1970s, the federal deficit averaged about 2 percent of the GNP. It rose to a peak of 4 percent in fiscal year 1976, in the middle of the deepest recession of the postwar period. We thought those figures were high. In historical perspective they were high, but in contrast, the deficit in the current fiscal year is going to reach about 6 percent of the GNP. As I suggested earlier, that figure isn't exactly comforting but the figure for 1983 isn't the crux of the problem.

The current deficit reflects the effects of unsatisfactory economic performance and high unemployment. In that sense, perhaps two-thirds reflect cyclical factors—incomes are down and hurt revenues, unemployment compensation and other factors are up and hurt expenditures. In fact, it can be argued that a large deficit in the midst of a recession helps to support income and helps get you out of the recession. However, the difficulty is that as things stand, there's no reasonable prospect that we can grow out of the deficit. Even if the economy expands over the next few years at or beyond most projections I've seen, and even if we assume satisfactory price performance, the federal deficit isn't likely to fall below 4 to 5 percent of the GNP for the rest of the decade, assuming no changes occur in current policies. Many people think that even those estimates are a little bit low because of the so-called "structural portion" of the deficit that's independent of the state of the business cycle, is going to be there in good years and bad, and that threatens to grow at least as fast as the recovery, which reduces the cyclical element in the deficit.

Under any reasonable forecast for growth, and again assuming no policy adjustments, the deficits are going to remain huge unless we make what is to me a totally unacceptable assumption that the government is going to revert to a historically high inflation rate and in effect, try to pump up the revenues through inflation. The problem is that left unattended, that situation poses a strong potential for a clash between the need to finance the deficit and the rising financial requirements for housing and business investment that are crucial to a healthy and sustained recovery. In the end, all these needs have to be met out of savings, the government deficit, housing, business investment, consumer credit and the rest. All our experience suggests there isn't likely to be enough savings to go around.

In a high year, consumers and business together may save 10 percent of the GNP. If you're running a deficit of 5 percent or so of the savings potential, you have a problem in financing the rest of the economy. Of course, the government is going to be financed in the marketplace, but the unavoidable implication is that interest rates will be higher in real terms than would otherwise be the case, as the government bids away savings from other sectors. The higher interest rates will dampen private investments in housing and may also attract funds from abroad that would supplement our domestic savings. However, a net transfer of savings from abroad implies a continuing trade and current account deficit; in other words, relatively weak exports and high imports, which is hardly a happy prospect. So, the long-run implication is both weak investment and a weak balance of payment structure, with lower levels of output over time.

Pessimism a natural reaction

After years of inflation, sharp fluctuations in interest rates, high interest rates and unsatisfactory economic performance, I can understand that atmosphere of caution and uncertainty about future planning for business. There's not much doubt that the prospect of huge budget deficits contributes to that mood in ways not precisely measured by any of the numbers that I have been reciting. It certainly contributes to concerns about a sharp rebound in interest rates from levels that are still relatively high, and contributes to continuing strong pressures on monetary policy or reversion to inflationary policies forced by the deficits.

In the fiscal policy environment we became accustomed to in the postwar era, the expansion of federal budget deficits in periods of economic slack could be consistent with interest-rate declines and recession. Of course, interest rates did decline in 1982 despite a rising deficit, but in circumstances like those, private credit demands also drop and help offset the impact of the deficit.

In the past, there was always a reasonable expectation that large deficits would recede as business activity turned up, and that helped to sustain confidence about the stabilizing role of the federal budget. But currently, the atmosphere is quite different. We can say that most of the recent and current deficit is recession induced, and in that sense, it replaces rather than competes with private credit demands. The difference is we cannot now look forward to a return to balance or to low deficits as the economy expands. It seems clear that is one reason why despite the interest rate declines, interest rates still remain high in real terms by historical standards. Moreover, we read constantly of the concern in the marketplace that interest rates may have already neared their cyclical lows and could rise again as economic activity recovers, even though they remain well above the current inflation rate. I do not think that is inevitable or probable, but that kind of view is understandable in the light of the federal financial picture.

The question naturally arises that if all that's true, why monetary policy shouldn't do something about it. Why don't we speed up the interest rate declines and speed up the recovery? Let me emphasize first that monetary policy itself can't create real savings. We can't correct a structural deficit. The basic savings investment, in balance with all its implications for future interest rates, is simply beyond our influence. What we can do, of course, is influence the growth of the money supply, the growth of other liquid assets and bank credit. In fact, growth in the so-called "monetary aggregates," (M_1, M_2, M_3, whichever you want to take), has been relatively high in recent months, and has exceeded the targets we set for ourselves early in 1982. Any pressures on banks' lending capacities currently are minimal, and under all the circumstances, that seems appropriate given the evident desire of the public to hold more money and more liquidity. It also seemed fully consistent with the needs of the economy, and in current circumstances, with progress against inflation.

However, there are limits to the process of credit and money creation. Beyond a certain point, the result would be to create more doubt about the prospects for further progress against inflation and further doubts about future lower interest rates. We would aggravate the uncertainties already generated by the budget deficit. It seems clear that excessive monetary growth would put us back in the same unsatisfactory situation of deeply ingrained inflationary expectations and great skepticism about the ability of our country to manage its economic affairs. Quite specifically, the effects on interest rates, particularly long-term interest rates, and our prospects for sustained recovery would not be helpful. It would be the reverse.

Confidence-building a key to recovery

There was a time when the American public felt confident about the ability of the government to maintain stability. The events of the past decade and more have undermined that sense of conviction. We have to restore it in some ways, most obviously and notably in progress against inflation. We are moving ahead and making progress. In that sense, I think that we're restoring a degree of confidence; however, fears that excessive budget deficits will undermine financial discipline work in the opposite direction. Those fears would only be compounded by excessive monetary growth.

Let me put the point in a slightly different way. We're exposed to fears of deficits out of control. The result is upward pressure on interest rates, particularly for longer-term securities now as well as in the future. The federal budget is a powerful symbol of the government's resolve to follow a disciplined, noninflationary course; that is, if the budget is appropriate. To the extent the budget deficit appears to be intractable, the burden placed on monetary policy to demonstrate the government's resolve to restore stability is only increased. At the same time, the flexibility of the monetary authorities in the central bank to respond to current developments is reduced, not enhanced.

I also think the opposite is true. Meaningful action to demonstrate the government's economic discipline on the fiscal side would clearly reduce concern about future inflation and interest rates, and in the process, would reinforce confidence that interest rates can decline further and that monetary policy over the years ahead can do its job in maintaining a course consistent with price stability. I don't want to suggest there is a simple trade-off between future budget restraint and easing current monetary policy.

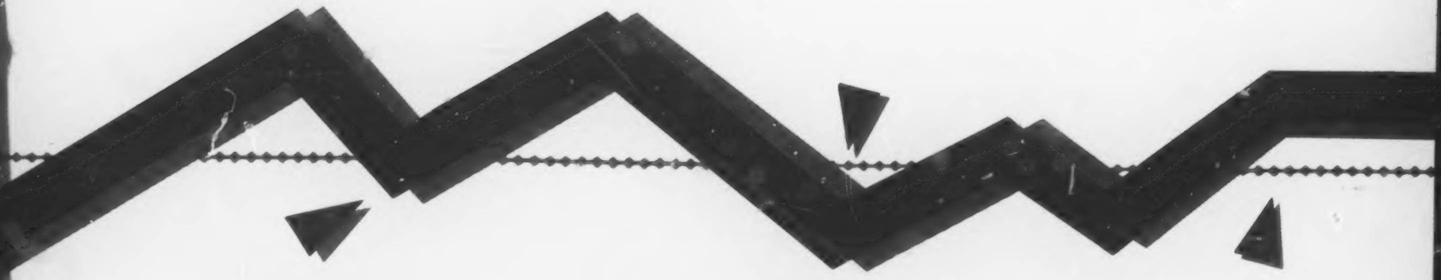
Reducing the threat of the large structural deficits stretching out to the end of the decade should have favorable effects on current interest rates and in dampening concerns about future increases. The greater the confidence not just in the financial markets, but of the community at large at home and abroad, in the government's will to follow a disciplined course can only reinforce the disinflation process as recovery proceeds, and will support moderation in wage bargaining, caution in pricing policy, confidence in financial markets, and of course, lower interest rates. None of that seems to justify monetary policy moving in a contrary direction of abandoning our continuing and necessary concern with restoring reasonable price stability. That point remains central to succeed in carrying through the fight on inflation, but fiscal restraint would certainly make our job easier. As things now stand, fear of growing deficits clouds the future and contributes to market pressures and inflationary uncertainties, adding to the burdens on monetary policy.

Action now pays off later

I'm optimistic that the necessary things can be done, partly because we have time. We're talking about changes that only need to begin to take effect in 1984, but their full impact is 1985 and 1986 and in the years beyond. In fact, I do not believe an abrupt change in 1983 is either feasible or desirable in the midst of recession. However, it's also true that if these future deficits are to be controlled, the process must start now and has to start with energy and force. Basic budgetary trends take a long time to change, and the knowledge that they will be changed is what will affect markets now. The amounts involved are large but they're not beyond our capacity. The necessary changes can be phased in over a two-or-three-year period. Our capacity to save and to finance is large enough so that some residual deficit can be managed for a while.

It's beyond the province of the Federal Reserve to deal with all the particular priorities that our elected officials must balance—national security, Social Security, entitlements and taxes. It does seem that the sheer arithmetic of the budget suggests that some changes are going to be necessary in all the major budget components. Of course, we're all aware of the initiatives already proposed in a number of areas.

I began by talking about a vision of self-reinforcing recovery and disinflation that may be starting, and what we're seeing now may be a harbinger of a long period of growth. We can get the deficit that clouds our future out of the way. It's a feasible proposition; the fact that the problems are recognized is half the battle. What remains is to take this period of difficulty that we've been through, build on the strengths generated during that period with respect to inflation and productivity, continue and amplify the policies that are necessary in that connection, see that this recovery gets started and is carried through, and not let this period of difficulty have been for nothing. I think that with the understanding around the country, we will have the necessary support to turn that hope into a reality.



Policy Choices and the Economic Outlook

Excerpts from a speech by:
Dr. Allen Sinai
Senior Vice President
Data Resources, Inc.

Probably more than any other factor, the economic policies of the past few years are responsible for the current state of the U.S. and world economies.

Following a severe and accelerating inflation in the U.S. from 1965 to 1980, both monetary and fiscal policies were shifted toward restraint in order to lower inflation. Between late 1979 and mid-1982, a generally tight monetary policy reflected in unprecedented high nominal and real interest rates, and as yet little stimulus from Reaganomics fiscal policies, achieved a major reduction of inflation from 10-to-15-percent annual rates in early 1980 to the current 3-to-4-percent range.

Unfortunately, the fallout from breaking the back of the severe inflation has been an unprecedented downturn in the U.S. and world economies. Record-high joblessness for the postwar era, the greatest failure fallout for business and financial institutions since the 1930s, stagnation in the rest of the world and for the LDCs, international financial strains of a severely threatening nature, and record federal budget deficits are the negatives from this process. The plusses so far are the huge improvement in price and wage inflation, considerably lower nominal interest rates and a strong dollar.

Just as policy has brought the economy to its current state, the policy choices to be made over the next few years will be critical to the patterns of recovery and expansion. In particular, measures affecting the federal budget deficits in coming years and the stance of the Federal Reserve are the most important.

Some new policy outlines already are emerging; most recently an accommodating stance on monetary policy to encourage economic recovery, but not too aggressive an easing so that a weak expansion will prevent a quick reacceleration of inflation. Fiscal policy has been tilted toward a tighter budget, but still not sufficiently to relieve concerns over the out-year budget deficits.

The current approach does run the risk that the world economies will not develop enough

Table 1.—Economic performance in the rest of the world since 1979 (compound annual growth rate from 1979:1 to 1982:3)

	Real GNP	Consumer price index	Industrial production	Employed persons
United Kingdom	-0.1	13.5	-2.5	-2.8
Germany	0.9	5.6	-0.2	-0.2
Italy	1.3	19.1	0.2	0.7
France	1.6	12.7	0.3	0.3
Japan	3.6	5.7	4.6	2.0
Canada	-0.2	10.9	-2.9	0.7

Source: Data Resources, Inc.

momentum to sustain an expansion. The dilemma is to determine the policies necessary to encourage more robust economic growth and less unemployment, but without inflation or interest rates rising too soon to prevent a sustained upturn. This is the challenge of the next several years.

The economy today

What is the current state of the U.S. economy? Is recovery the next stage, or more recession, or perhaps a depression? Can expansion be sustained? What patterns can be expected for the economy and financial markets this year and beyond? What choice of policies might achieve a healthy expansion and lower unemployment without causing a significant reacceleration of inflation? Finally, what lasting changes have occurred in the economy as a result of the severe cyclical downturn from 1979 to 1982?
In brief:

- The long downturn of the U.S. economy ended in December and a recovery has begun. Generally higher retail sales, especially for autos; a sharp rise for consumption, in real terms; strength in housing and residential construction; a huge reduction of inventories in the fourth quarter; sustained lower interest rates and record-high stock prices; a turnaround for industrial production in January; and even increases for order books in a few depressed industries all indicate that the economy has started to grow again. Real GNP should rise 2 to 3 percent in the current quarter, 3 to 4 percent in the second, and 4 to 5 percent in the second half. For the year, a 1.7-to-2-percent increase should occur in real GNP, compared with the postwar record 1.8-percent drop in 1982.

- Even as the early stages of a mild recovery develop, the general perception will persist that the economy is still recessed. Continuing double-digit unemployment rates, downward pressure on wages, a tough posture on costs by business, and the selective nature of the initial improvement against a backdrop of record slack for product, labor and capital markets will prevent a clear recognition of expansion. Indeed, 1983 is probably best viewed as a year of transition to a strong and broad-based expansion for 1984.

- The record slack in the economy is the fallout of a policy choice by the central bank in 1979 to wage an historic battle against inflation, and virtually ensures no major reacceleration of inflation for at least another year or two. Actual real GNP in the fourth quarter was $215.4 billion short of potential, a record 12.8-percent gap. The current 10.8-percent unemployment rate actually understates the joblessness problem. Once account is taken of discouraged workers and those working parttime who are usually employed fulltime, the rate is 14.4 percent. Utilization rates are at a postwar low, 67.3 percent for all manufacturing and 69.8 percent during 1982, compared with the previous postwar low of 69.0 percent in March, 1975 and 72.9 percent for the year 1975. Over the next few years, the huge slack in the economy will be the problem that inflation was in the late 1970s.

- A sustained, although somewhat anemic and uneven expansion will most likely occur, gathering momentum through the year. The profile of the

BEST AVAILABLE COPY

Table 2.— Reaganomics: the scorecard to date

Source: Data Resources, Inc.

	1981:1	1982:4 or latest	Change since 1981:1 (Percent change or percentage points)
The Economy			
Real GNP			
(Bils. of 72 $s)	1,507.8	1,471.7	-36.1; -1.4%
Growth rate	7.9	-2.5	
Industrial production			
Growth rate	8.3	-8.5	-16.8; -6.1%
Inflation			
Implicit GNP deflator			
Percent change	10.9	4.3	-6.6
CPI-U			
Percent change	9.7	0.8	-8.9
Unemployment rate	7.4	10.8	3.4
Money and interest rates			
M_1 (% change)	10.3	17.1	6.8
Prime loan rate (%)	20.2	11.0	-9.2
New high-grade corp. bond rate (%)	13.5	11.1	-2.4
Stock market			
S & P 500	132.97	143.88	8.2%
Federal government			
Nondefense purchases			
(Bils. of 72 $s)	36.9	42.4	5.5; 8.3%
Growth rate (%)	20.8	103.5	
Defense purchases			
(Bils. of 72 $s)	71.0	81.3	10.3; 8.1%
Growth rate (%)	8.3	3.5	
Federal spending/real GNP (%)	23.0	26.3	3.3
Deficit (NIA)			
(Bils. of $s)	-39.7	-199.5	-159.8

*1981:1 is first quarter or first month.

BEST AVAILABLE COPY

recovery is likely to take on a traditional cast, with increased housing activity and consumption leading the upturn, strong military spending providing a lift as well, then inventory accumulation and finally, rising employment. Business capital spending will not rise until well after the expansion is underway, awaiting permanently higher sales, much higher capacity-utilization rates and improved corporate financial positions. The greater affordability of big-ticket items from lower interest rates and rising income will help move the economy higher, as will the impacts on consumption from the personal income tax cuts of October, 1981; July, 1982; and July, 1983. By year-end, the expansion should be broad based, with almost all areas of the U.S. economy participating and good-sized increases occurring in sales, production and employment. However, the expansion still will be considerably weaker than the typical postwar experience, given continuing high, real interest rates. The slack generated in the economy by the recessions of 1980 and 1981-82, and the mild recovery, will leave a large gap between actual and potential GNP at least through 1984.

- The sustainability of the recovery, not its emergence, is the real uncertainty for 1983, with an extraordinary set of risks which are essentially mines in a minefield on the road to a healthy expansion. These risks include: 1) record joblessness for the postwar era and its effects on income growth, consumer confidence and spending; 2) relatively high nominal and real interest rates that will restrain the upturn in the interest-sensitive categories of spending; 3) the lean posture of business and hesitancy in spending and rehiring until sales appear permanently higher in relation to inventories; 4) enforced austerity in many LDCs as loans made to debt-ridden countries are tied to retrenchment, and a threatened banking system contracts the supply of loanable funds; 5) weakness on U.S. net exports from the sluggish rest-of-the-world economies and lingering effects of a strong dollar; and 6) the potential clash of huge out-year budget deficits against monetary policy in years of recovery that might sustain interest rates at levels that would abort expansion. These risks will prevent a typical first-year recovery in the economy, with only a 3.5-to-4-percent rise in real GNP from fourth quarter to fourth quarter, compared with the average 7.5-percent rise for the first year of all recoveries since 1947.

- Interest rates are forecast to decline, on average, ending the year lower in 1983:4 than in 1982:4. The prime rate should dip to 10 or 10.5 percent before rising back to 11 percent at year-end; consumer loan rates are due to decline another percentage point or two; mortgage rates are headed another percentage point lower, to a range of 12 to 14 percent; and top-quality corporate bonds should drop to 11 or 12 percent.

- Interest-sensitive sectors of the economy such as housing and automobiles should respond favorably to lower interest rates and improved financial market conditions, rising gradually from the current depressed levels. However, still relatively high real and real aftertax interest rates will limit the rebounds in these and related areas. The DRI projections for housing starts show an average of 1.4-million units in 1983 and 1.6-million units in 1984, levels still far below 1979. Auto sales are forecast at 8.7-million units in 1983, up from 8.0-million units in 1982, but far below the 10.6-million-unit pace of 1979.

- For a sustained expansion to occur, policies must be designed to keep interest rates at or below current levels. Any rise of interest rates, for whatever the reason, would threaten to abort the recovery, which is currently concentrated in interest-rate-sensitive areas. Both fiscal and monetary policy will have to continue tilting toward a tighter fiscal, easier money mix, as was the case last summer. This will require further reductions of federal spending in the FY1984, FY1985 and FY1986 budgets, including passage of the proposed

Table 3.—Data Resources, Inc. forecast of the U.S. economy

	1982		1983				1984		Years				
	III	IV	I	II	III	IV	I	II	1981	1982	1983	1984	1985
GNP and its components (Billions of dollars--SAAR)													
Total consumption	1986.3	2034.6	2064.9	2105.2	2149.6	2198.2	2244.0	2293.1	1843.2	1972.0	2129.5	2317.6	2526.6
Nonresidential fixed investment	344.2	336.6	323.9	321.8	327.2	335.7	347.4	359.3	346.1	347.5	327.2	365.6	417.1
Residential fixed investment	94.3	99.8	112.1	119.8	127.8	134.4	139.2	145.4	105.0	95.8	123.5	149.5	178.7
Inventory investment	4.7	-38.5	-10.4	0.4	5.2	7.6	17.2	17.1	20.4	-21.4	0.7	20.2	30.5
Net exports	6.9	-6.9	-10.8	-14.2	-18.9	-19.3	-16.0	-13.6	26.1	16.6	-15.8	-12.0	-4.6
Federal purchases	259.0	276.1	279.6	280.8	285.9	298.4	304.4	312.8	228.9	257.3	286.2	317.0	348.0
State and local government purchases	392.7	399.6	404.3	410.0	415.3	421.0	427.3	435.1	368.0	389.8	412.7	439.5	474.3
Gross National Product	3088.2	3101.3	3163.5	3223.9	3292.1	3375.9	3463.4	3549.2	2937.7	3057.5	3263.9	3597.3	3970.4
Real GNP (1972 dollars)	1481.1	1471.7	1482.2	1491.3	1504.8	1522.3	1539.3	1557.5	1502.6	1475.5	1500.2	1567.1	1634.0
Prices and wages (annual rates of change)													
Implicit price deflator	5.0	4.3	5.1	5.4	4.9	5.6	6.0	5.2	9.4	6.0	5.0	5.5	5.9
CPI--all urban consumers	7.6	2.6	4.8	5.7	5.2	5.3	5.8	5.0	10.3	6.1	5.0	5.3	5.6
Producer Price Index--finished goods	6.4	4.2	2.8	4.2	5.2	5.4	5.2	5.0	9.3	4.0	4.1	5.2	6.0
Compensation per hour	6.4	4.7	6.4	5.3	6.0	6.3	8.5	6.1	9.6	7.1	5.8	6.7	6.7
Core inflation	7.6	7.3	6.8	6.4	6.0	5.7	5.5	5.5	9.0	7.8	6.2	5.4	5.5
Production and other key measures													
Industrial production (1967=1.000)	1.382	1.351	1.372	1.389	1.414	1.446	1.472	1.506	1.509	1.386	1.405	1.521	1.622
Annual rate of change	-3.4	-8.6	6.2	5.1	7.3	9.4	7.6	9.5	2.6	-8.1	1.4	8.3	6.6
Housing starts (million units)	1.118	1.251	1.349	1.433	1.490	1.513	1.552	1.605	1.100	1.060	1.446	1.642	1.816
Retail unit car sales (million units)	7.7	8.7	8.4	8.4	8.8	9.3	9.3	9.7	8.5	8.0	8.7	9.8	10.4
Unemployment rate (%)	10.0	10.7	11.0	10.7	10.6	10.3	10.1	9.8	7.6	9.7	10.7	9.6	8.5
Federal budget surplus (NIA)	-156.0	-199.5	-189.3	-183.2	-201.4	-207.1	-204.3	-204.3	-60.0	-148.4	-195.3	-200.6	-189.2
Money and interest rates													
Money supply (M_2)	1941.9	1985.7	2028.8	2067.2	2119.4	2171.2	2219.0	2267.7	1807.4	1985.7	2171.2	2381.1	2627.8
Percent change, 4th quarter to 4th quarter	10.1	9.3	9.0	7.8	10.5	10.1	9.1	9.1	9.5	9.9	9.3	9.7	10.4
New AA corp. utility rate (%)	15.02	12.54	12.12	11.36	10.79	10.51	10.49	10.47	16.25	15.13	11.20	10.53	10.90
New high-grade corp. bond rate (%)	14.09	11.07	10.96	10.56	10.18	10.00	10.02	10.03	15.01	13.89	10.43	10.08	10.46
Federal funds rate (%)	11.01	9.29	7.96	8.26	8.63	8.95	9.63	9.31	16.38	12.26	8.45	9.08	9.69
Prime rate (%)	14.72	11.96	10.34	10.52	10.77	11.26	11.92	11.64	18.87	14.86	10.72	11.41	11.55
Incomes (Billions of dollars)													
Personal income	2592.4	2623.0	2669.5	2718.7	2773.3	2840.4	2907.0	2979.9	2415.8	2569.6	2750.5	3013.9	3299.3
Real disposable income (% change)	1.3	-0.2	1.5	2.1	6.0	4.5	4.0	4.9	2.5	1.1	2.1	4.4	3.6
Saving rate (%)	6.9	5.8	5.9	5.8	6.5	6.6	6.9	7.1	6.4	6.5	6.2	7.0	7.3
Profits before tax	180.3	180.6	185.3	188.3	194.2	202.0	207.0	220.4	232.1	176.1	192.4	228.1	276.3
Profits after tax	119.4	120.4	122.9	124.6	128.6	133.7	137.3	145.8	150.9	117.8	127.4	150.5	181.5
Company profits	94.0	88.2	91.6	99.0	108.4	111.3	114.1	116.3	107.2	90.7	102.6	119.2	136.5
Four quarter percent change	-11.1	-16.3	3.4	7.6	15.3	26.1	24.6	17.4	2.6	-15.4	13.1	16.2	14.5
Composition of real GNP (Annual rates of change)													
Gross National Product	0.7	-2.5	3.0	2.4	3.7	4.7	4.5	4.8	1.9	-1.8	1.7	4.5	4.3
Final sales	-1.3	3.1	-0.5	1.0	3.1	4.5	3.4	4.9	1.0	-0.6	1.1	3.9	4.1
Total consumption	0.6	5.0	1.1	2.3	3.3	4.0	2.7	4.0	1.8	1.0	2.5	3.4	3.4
Nonresidential fixed investment	-7.7	-9.0	-15.9	-5.5	3.4	6.7	9.0	9.5	3.5	-3.8	-7.8	7.0	8.2
Equipment	-8.8	-12.1	11.3	-2.0	8.9	11.3	12.2	12.5	2.4	-6.8	-6.2	10.5	9.2
Nonresidential construction	-5.2	-2.3	-24.6	-12.5	-8.0	-3.3	1.6	2.5	6.3	3.1	-11.1	-0.9	5.7
Residential fixed investment	-5.9	24.2	50.5	23.6	21.9	15.2	7.4	12.2	-4.9	-10.9	24.3	13.7	11.9
Exports	-116.7	-26.9	-2.8	3.1	6.2	7.1	9.0	6.2	-0.5	-6.9	-6.5	6.8	6.2
Imports	4.5	-14.8	-0.4	4.0	7.8	6.2	5.5	4.3	7.2	0.6	0.4	5.2	4.7
Federal government	23.2	28.4	-3.1	-6.9	0.4	6.9	1.9	5.8	3.7	5.2	4.7	3.0	2.3
State and local governments	-0.2	1.1	-1.1	0.1	-0.4	-0.1	-0.1	1.6	-0.8	-0.9	-0.1	0.6	1.8

BEST AVAILABLE COPY

Social Security reform, a lessened pace for military spending and some additional taxes, especially in the out-years. "Biting the bullet" on federal government spending, in particular on entitlements and military spending, is essential. Should the administration fail to realistically tackle these issues in the FY1984 budget, the financial markets will again react in familiar negative fashion, with a rise of interest rates occurring to threaten the recovery. Current DRI projections for unified budget deficits of $191.8 billion in FY1984 and $180.9 billion in FY1985 are still too high and are propping interest rates by 100 to 150 basis points.

- The Federal Reserve must continue to compensate for any budget tightening by promoting monetary growth at or somewhat above the upper range of its target limits. A low profile of interest rates is essential to sustaining expansion and defusing the domestic and international financial squeeze of 1980 to 1982. A fundamental change in the approach to policy by the Federal Reserve is probably required, given that the monetary aggregates M_1 and M_2 will continue to give false readings on the economy and inflation in a new deregulated environment, and with so many changes in monetary and near-money financial instruments. Indeed, it would probably be better for the central bank to focus directly on its ultimate target of nominal GNP, rather than an intermediate proxy such as M_1, M_2 or M_3. The DRI projections of recovery are contingent upon a modestly accommodative Federal Reserve policy for 1983.

- Business capital formation will respond only slowly to the more favorable financial conditions despite the tax stimulus of ACRS, given sluggish sales growth, relatively high interest rates and low rates of capacity utilization. No sharp increase in business capital spending is projected until 1985, when an 8-to-9-percent rise is expected, in real terms. The forecast decline in 1983 is 7 to 8 percent, with only a 5-to-6-percent increase for 1984.

- The major task of economic policy now is to insure expansion without reigniting inflation, thereby improving the inflation-unemployment tradeoff for the rest of the 1980s. The Federal Reserve will have to determine whether to continue the new Fed policy, now that the back of inflation has been broken. That policy was designed as a major anti-inflation tool, but no longer may be needed in what now is fundamentally a disinflationary environment. The administration and Congress will have to deal with an even tighter budget, especially in the out-years. Most likely, when the dust settles, these policies will emerge since they are essential to a sustained expansion. However, between now and then, there will be many ups and downs in economic performance and the financial markets.

- The economy will never be the same as the result of this long cyclical downturn, emerging new technologies, deregulation of the financial industry, new trends in saving and a major shift to enhanced productivity growth and efficiency. A new industrial revolution is in place; the shift from heavy manufacturing to service and high technology, and a realignment of industries and lines of business.

As for Reaganomics, success on inflation and lower interest rates compared with the early 1980s is sure. Most likely by 1984, the major parameters of the economy will be moving in the directions set by administration goals for economic performance, without any major reacceleration of inflation having occurred. The odds overwhelmingly favor economic recovery this year and in 1984, within a backdrop of a chronically weak economy, in fits and starts to be sure, but on average, showing steady improvement. However, the costs of the inflation improvement, including jobs, and the potential for high interest rates because of large federal budget deficits, and chronic weakness in certain areas and sectors, are quite sizable. The mid-term grades of the new policies must be judged as failing in many areas, with a shaky performance in the short run. If all breaks right, however, there will be considerable success in the longer run, with much better "final" grades.

The Florida Economic Outlook

Dr. Hank Fishkind
Associate Director

Bureau of Economic and Business Research
University of Florida

Economic performance [illegible] 1982

The Florida economy posted a relatively good record in 1982, given the depth of the U.S. recession. As the track record in Table 1 shows, population growth totaled 2.5 percent, increasing by 232,200. Personal income increased by 8.8 percent, which translates into a real gain of 2.8 percent after inflation. Total nonagricultural employment improved by 1.5 percent and the unemployment rate averaged 7.7 percent. Tourist arrivals by car and air soared strongly to total 34.3 million. Housing starts were battered by the recession and by high interest rates, but still totaled almost 100,000.

However, the actual performance of Florida's economy in 1982 was well below the forecast presented last year. The main reason for the forecast error was our projection of a U.S. recovery in mid-1982. As noted above, the U.S. recovery is just now getting underway. Given the forecast error last year, it is useful to examine the linkages

Table 1. —Track record: Florida forecast

	Outlook for 1982	Actual 1982*
Population growth (%)	2.8	2.5
Personal income growth		
Current dollars (%)	13.1	8.8
1972 dollars (%)	5.4	2.8
Total employment growth (%)	2.9	1.5
Unemployment rate	7.1	7.7
Tourist arrivals (air and auto only, in millions)	33.7	34.3
Housing starts (thousands)		
Single-family units	86.9	53.6
Multifamily units	57.4	40.3

*Year totals are based on actual data for the first three quarters plus *Outlook's* forecast for the fourth quarter.

between the U.S. and Florida economies to highlight the transmission of economic forces.

Population migration is one of the most important linkages. Florida's population grows almost entirely because of the relocation of people from the eastern United States. The inflow of new residents can be usefully separated into two age categories, 65 and older and under 65. The retiree component forms part of Florida's economic base. Retirees bring spending power into the state from the outside, and thus are a source of primary demand. The migration of retirees depends critically on their ability to sell their homes. When a recession occurs and housing markets soften in those regions of the northeast and midwest which send retirees to Florida, fewer retirees migrate. For those migrants who are under age 65, primary considerations include not only their ability to sell their homes, but also the availability of jobs in Florida. Once again, recessions reduce their ability to sell their homes, but recessions also reduce the number of new jobs in Florida.

This brings us to the second set of linkages, the creation of jobs and income from Florida's exports to the rest of the U.S. economy and to the rest of the world. These exports take many forms, but they can be identified because each provides revenue to the Florida economy from sources outside the state. For example, Florida exports citrus products which result in income flows from outside the state. In addition, Florida "exports" vacation services which also produce inflows of income from external sources. However, in this case the vacationers must travel to the state to have their vacations. Thus, tourism also forms a part of Florida's primary revenue-producing sector. Other examples include Florida's electronics and defense-related industries which produce goods for sale outside of the state. In all of these cases, the revenue inflows to Florida depend in part upon the behavior of the U.S. and world economies.

A third set of linkages between the Florida and U.S. economies involves interest rates and inflation. Interest rates and price inflation are largely determined in the national economy, and are only slightly affected by developments in Florida. However, these are powerful forces which affect the Florida economy.

The behavior of the national economy affects Florida through these linkages. For instance, national economic recovery boosts the influx of retirees and increases the demands for Florida's exports. Falling rates of interest and inflation improve the profitability of most businesses and enhance the prospects for population growth. This scenario being the case, the national forecast outlined above is very positive for Florida.

Indeed, the prospects for Florida are excellent over the next three years, presuming that the national forecast is accurate. An expanding national economy will boost the demand for Florida's manufactured goods, stimulate tourism and increase population growth. In addition, falling interest rates, stable prices and strengthening housing markets will reinforce these trends.

Although the national economy did not recover as predicted in 1982, the Florida economy proved to be remarkably resilient to the recession. Instead of declining in 1982:3, the Florida economy began to recover, and it is clear that Florida is entering another period of economic growth. As the data in Table 2 indicate, the third quarter of 1982 will mark the beginning of this expansion cycle. Following the weak first half of 1982, employment posted a modest rebound in 1982:3, housing starts edged upward for the first time in more than a year, and tourism remained strong. Although some economic indicators, including population growth and taxable sales, remained stagnant, recent data suggest these will turn around in the very near future. Mortgage interest rates are still declining, housing markets are strengthening across the nation and retail sales are picking up. As the national economy regains momentum, Florida's growth rate will accelerate.

The rebound in 1982:3 is apparent in the data on nonagricultural employment. After slipping by almost 8,000 in the second quarter, employment increased nearly 14,000 in 1982:3. The gain was concentrated in the services sector with smaller increases in trade, government, and transportation, communications and utilities. Although employment in the manufacturing and construction sectors continued to contract in the third quarter, the declines were less severe than in 1982:2. Thus, the overall tenor of Florida's labor markets improved during the quarter, and the unemployment rate edged downward from 8.0 percent in 1982:2 to 7.4 percent in 1982:3—its lowest level in a year.

Construction and manufacturing were the two weakest components of total employment. The contraction in construction employment is a direct effect of the reduced rate of residential construction. Fortunately, construction activity is beginning to recover. Florida's manufacturing sector is depressed by: (1) the national recession which sliced the demand for Florida's exports, (2) the depressed construction industry which purchases many of its manufactured inputs in Florida, and (3) the strength of the U.S. dollar which has trimmed foreign exports.

For the first time in more than a year, the housing sector exhibited some significant improvements during the third quarter. Total starts increased from 22,200 in the second quarter to 23,600 in 1982:3. Starts of both single- and multifamily units increased during the quarter.

In addition, tourism retained the gains posted during the second quarter of the year. Visits jumped from 7.7 million in 1982:1 to 9.0 million in 1982:2. At 8.9 million in the third quarter, the visitor total was virtually unchanged.

Three indicators were weak in the third quarter—population growth, taxable sales and savings deposits. Population growth continued to slow, reaching 55,800 during the third quarter. However, the rate of decline is also slowing and population growth usually recovers after a national economic upswing is underway. Thus, some continued weakness in population growth is to be expected at this point in the national business cycle.

Taxable sales also declined during the third quarter, which was a bit surprising since gross sales increased. This decline appears to be the result of a temporary aberration in the relationship between gross sales and taxable sales. Usually, both of these data series move together, but this summer's increase in the sales tax from 4 percent to 5 percent temporarily disturbed the historical relation of gross sales to taxable sales. The Florida Department of Revenue sent out a large

BEST AVAILABLE COPY

Table 2.—Recent trends in Florida economic indicators (seasonally adjusted quarterly changes unless noted, in thousands)

	81:4	82:1	82:2	82:3	Average 81:4 to 82:3
Employment	29.8	9.1	-7.9	13.9	11.2
Manufacturing	-4.1	-4.8	-7.4	-5.9	-5.6
Trade	7.1	20.7	8.0	4.0	10.0
Services	24.1	3.5	7.0	20.0	13.6
Finance, insurance, and real estate	0.7	1.5	-0.5	0.0	0.4
Construction	-1.5	-2.1	-2.1	-0.8	-1.6
Government	2.2	-0.6	-4.1	2.9	0.1
Transportation, communications, and utilities	-0.1	-0.2	2.2	0.7	0.6
Unemployment rate (level)	7.5	7.9	8.0	7.4	7.7
Population	63.0	60.0	57.8	55.8	59.1
Taxable sales ($ billions)	-0.2	-0.4	0.3	-0.2	-0.1
Savings deposits ($ billions)	0.4	0.5	0.8	-2.8	-0.3
Housing starts (level)					
Single	11.1	12.4	13.0	13.5	12.5
Multi	13.2	9.7	9.2	10.1	10.5
Tourism (level)					
Air (millions)	2.9	3.0	3.1	3.0	3.0
Car (millions)	4.9	4.7	5.9	5.9	5.3
Total expenditure ($ billions)	4.4	4.8	3.6	5.2	4.5

Note: Totals may not add due to rounding and seasonal adjustment.

number of billings to retailers who failed to recoup the correct sales tax for the state this summer. However, much of this money was not received until October. So, the taxable sales figures for the third quarter are artificially depressed.

Finally, the reported data on Florida savings deposits show a sharp drop of $2.8 billion. This decline is strictly a statistical artifact, and does not reflect actual financial conditions. Two large Florida savings and loan institutions, First Federal of Broward and Washington Federal of Miami, have merged with out-of-state savings and loans. Beginning in June, the Federal Home Loan Bank Board began including the data for these institutions with their out-of-state partners. As a result, the reported data for Florida dropped sharply. Unfortunately, there is no way to reconstruct these data to eliminate this problem.

It is useful to turn our attention now to the larger picture and to focus on the overall nature of the current business cycle in Florida. Since 1980, the national economy has experienced two recessions, one in 1980 and one in 1981-82. These recessions were characterized by record-high interest rates and severe contractions in housing and manufacturing. The U.S. economy is now operating at its lowest level of activity since World War II. Yet, unlike its situation in 1974 and 1975, when high interest rates triggered a major recession, Florida's economy has outperformed the nation's.

Four factors account for Florida's improved performance during the first part of the 1980s. First, Florida did not suffer the excessive speculative boom in multifamily housing in the 1980s that occurred in the 1970s. Thus, there is no major overhang of unsold housing units as there was in 1975. Second, Florida's manufacturing sector is relatively small, so that the decline in demand for manufactured products has had less impact on the state. Third, Florida's large service and trade sectors have continued to grow during the recession, and have largely offset losses in manufacturing and construction. Finally, since Florida has such a large number of retirees, property income and transfer payments are a large component of personal income. Thus, as the growth in wage and salary income has slowed during the recession, property income and transfer payments have offset some of the declines. So, total personal income and the resulting demand for goods and services have remained relatively high in spite of the recession.

Table 3 puts the current Florida business cycle in perspective by examining economic trends in the state since 1970. Data for the final quarter of 1982 were taken from the current forecast. First, since 1970, population growth in Florida has varied from a high of 479,000 in 1973,to a low 114,000 in 1975. Figure 1 illustrates these trends. Population growth has exceeded 400,000 only twice, and has fallen below 200,000 only twice. In addition, population growth has not been stable. The mean population growth since 1970 is 293,920, and the standard deviation is 106,230. For 1982, population growth is estimated at 232,000, which is the fourth lowest total since 1970.

Second, annual employment gains range between 308,000 in 1972 and -107,000 in 1975. The mean increase in jobs is 131,000. With only 56,000 new jobs created this year, 1982 was very weak, the fourth lowest since 1970.

Since 1970, Florida's unemployment rate has touched a low of 4.3 percent and a high of 10.7 percent. This range is displayed in

Table 3. —Historical perspectives on the Florida economy

	Population growth (000s)	Growth in total non-agricultural employment (000s)	Unemployment rate (percent)	Growth in taxable sales (billions)	Total housing starts (000s)	Number of tourists (millions)
1970	330	52	4.3	NA	115	18.5
1971	382	145	4.9	0.9	149	20.7
1972	445	308	5.1	0.9	249	22.7
1973	479	223	4.3	1.1	269	25.2
1974	241	-12	6.2	-0.2	133	24.2
1975	114	-107	10.7	0.9	53	28.1
1976	154	87	9.0	-0.1	67	30.3
1977	212	203	8.2	1.6	110	31.2
1978	282	248	6.6	1.7	160	34.4
1979	286	198	6.0	2.1	195	35.8
1980	353	176	5.9	1.8	172	35.9
1981	311	130	6.8	1.5	136	36.0
1982*	232	56	7.8	0.0	94	38.4
Mean	293.9	131.0	6.6	1.0	146.3	29.3
Standard deviation	106.2	114.1	19.0	7.7	64.0	66.0

NA Not available.

*The final quarter of 1982 is taken from *Outlook's* current forecast.

[illegible] The average unemployment rate since 1970 is 6.6 percent. For 1982, the unemployment rate is projected to be 7.8 percent.

Third, Florida's taxable sales have increased by an average of $1 billion each year since 1971. However, in some years, sales have grown little while in others, sales have risen strongly, including a rise of more than $2 billion in 1979. For 1982, taxable sales are expected to show no gain at all.

Figure 2 displays the pattern of total housing starts in Florida. Their wide swings are obvious. Starts have exceeded 200,000 on two occasions, 1972 and 1973, and have fallen below 100,000 twice, in 1975 and 1976. On average, starts have totaled 146,300. For 1982, starts are projected at just 94,000.

Tourist visits exhibited a strong upward trend and have declined only once, in 1974. Within this strong period of growth, there is a plateau at around 36 million reached first in 1979. Tourist arrivals by automobile were weaker during this period, producing the plateau. However, the plateau was breached decisively in 1982 and visits should reach 38.4 million.

To summarize, the Florida economy has weathered the 1981-82 recession quite well. While the recession has reduced the level of economic activity substantially in Florida, the state's economy was not devastated in this cycle as it was in 1975 and 1976. Furthermore, the most recent data indicate that a recovery is already underway in Florida. Tourism is strong, housing starts are increasing and employ

Figure 1. —Population growth in Florida (in thousands)

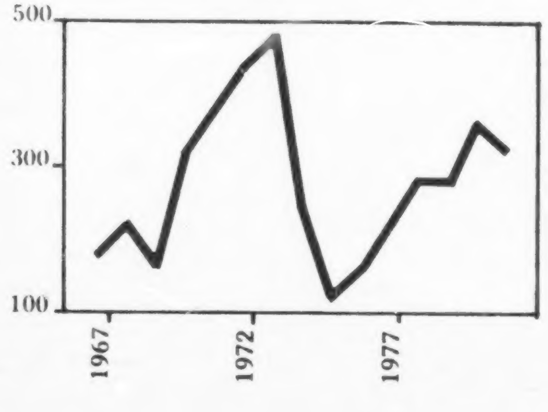
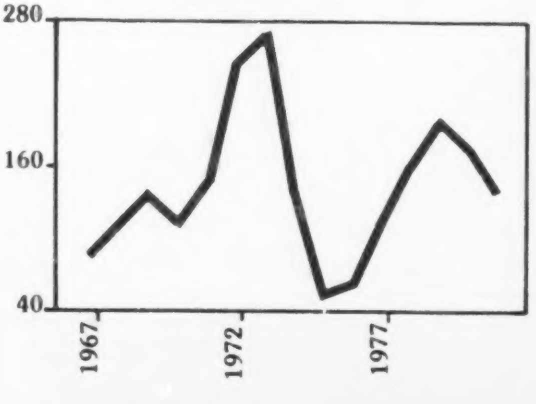


Figure 2. —Total housing starts in Florida (in thousands)



BEST AVAILABLE COPY

ment is growing. However, population growth is still below average and slowing. Until population growth rebounds, the Florida recovery will be modest.

Florida forecast: recovery followed by boom

The outlook for Florida is excellent over the next three years. The national economic recovery and continued moderation in interest rates and inflation will benefit the Florida economy. In the near term, Florida's economic growth will be moderate. The first half of 1983 will bring strong growth in manufacturing, particularly in electronics and defense-related industries, coupled with continued strength in tourism. Population growth will accelerate during this period, recovering fully by mid-1983. From that point on, a strong cyclical upswing in housing starts develops, and by the end of 1983, starts surpass their previous cyclical peak set in 1979. Spurred by rapid population growth and strong residential construction, the Florida economy will be booming in 1984 and 1985.

Table 4 contains the forecast for population growth and housing starts. After reaching its low point in 1982:3, population growth is projected to accelerate throughout 1983. As we have often noted, it takes time for population growth to fully recover after a major recession, and 1983 will be the year of recovery. Population gains total a modest 232,200 in 1982. This increase is followed by three years of strong growth with increases of around 300,000 per year from 1983 through 1985. These trends are illustrated in Figure 3.

Figure 3 also displays the two age components of migration, people 65 and older and those under age 65. The national recession, high interest rates and weak housing markets pushed net migration for each age group down to a recessionary trough in 1982:3 (the scaling makes this trough for the 65-and-older group somewhat difficult to see). All of these forces are now becoming positive factors—a national recovery is on tap for 1983, interest rates are declining and housing markets are improving.

Furthermore, demographic forces will enhance the prospects for migration to Florida over the next ten years. Florida draws a substantial portion of its migrants from two primary population age cohorts: people age 25 to 40 and those 65 and older. From 1980 through 1985, these two age cohorts will be the most rapidly growing cohorts in the nation. From 1980 through 1985, the "baby boom" generation born after World War II will be 25 to 40 years old, and improvements in medical care are making the 65-and-older age cohort expand rapidly. The combination of favorable demographics and positive economic conditions will lead to rapid population growth in Florida during the 1983-85 period.

A recovery of the residential construction industry was already apparent in the data for 1982:3. The drop in mortgage rates was the primary motivator. By year-end 1982, total starts will reach 93,900, with more than half of these being single-family units. Rapid recovery in residential construction will take place in 1983. Interest rates are forecast to continue moving lower throughout the year, population growth will accelerate, and there is very little unsold housing inventory in most markets. Single-family starts jump almost 30 percent to 82,700 in 1983, while multifamily units soar more than 30 percent to 66,700.

Further improvement occurs in 1984 and 1985. Single-family starts are projected at 119,700 and 123,900, while multifamily starts reach 95,800 and 103,500 for 1984 and 1985, respectively. These trends are illustrated in Figure 4, which merits three comments. First, housing starts are projected to peak in late 1984 and early 1985, because by then mortgage rates will be drifting higher and population growth will be lower. Second, we still expect single-family starts to exceed multifamily starts because of cost considerations, ease of permitting, lower risk and greater demand for single-family units.

Table 4.—Summary of the Florida forecast
(seasonally adjusted at annual rates)

	Quarterly					Annual			
	82:3	82:4	83:1	83:2	83:3	1982	1983	1984	1985
			FLORIDA						
Population growth (000s)	218.4	234.5	269.6	284.0	297.5	232.2	291.6	310.3	306.2
% change	2.1	2.3	2.6	2.7	2.8	2.5	2.5	2.9	2.8
Housing:									
Single-family starts (000s)	53.9	52.9	68.7	79.4	84.9	53.6	82.7	119.7	123.9
Multifamily starts (000s)	39.6	46.6	51.7	64.6	73.0	40.3	66.7	95.8	103.5
Total nonagricultural (000s)	3776	3787	3807	3850	3901	3778	3876	4058	4246
% change	0.7	1.2	2.2	4.6	5.4	1.5	2.6	4.7	4.6
Unemployment rate (level)	7.4	7.7	7.9	7.8	7.6	7.7	7.7	7.2	6.3
Tourist visits (millions)	39.4	39.2	37.8	38.0	39.8	38.4	39.0	41.5	43.3
Income:									
Personal	114.1	116.4	119.5	123.2	126.9	112.7	125.1	141.2	159.8
% change	10.7	8.5	11.1	12.8	12.8	8.8	11.0	12.9	13.2
Real personal	55.0	55.4	56.1	57.1	58.1	54.7	57.5	61.4	65.6
% change	3.5	3.4	4.6	7.4	7.2	2.8	5.2	6.8	6.8

BEST AVAILABLE COPY

Figure 3. —Florida population growth and its components (in thousands, seasonally adjusted)

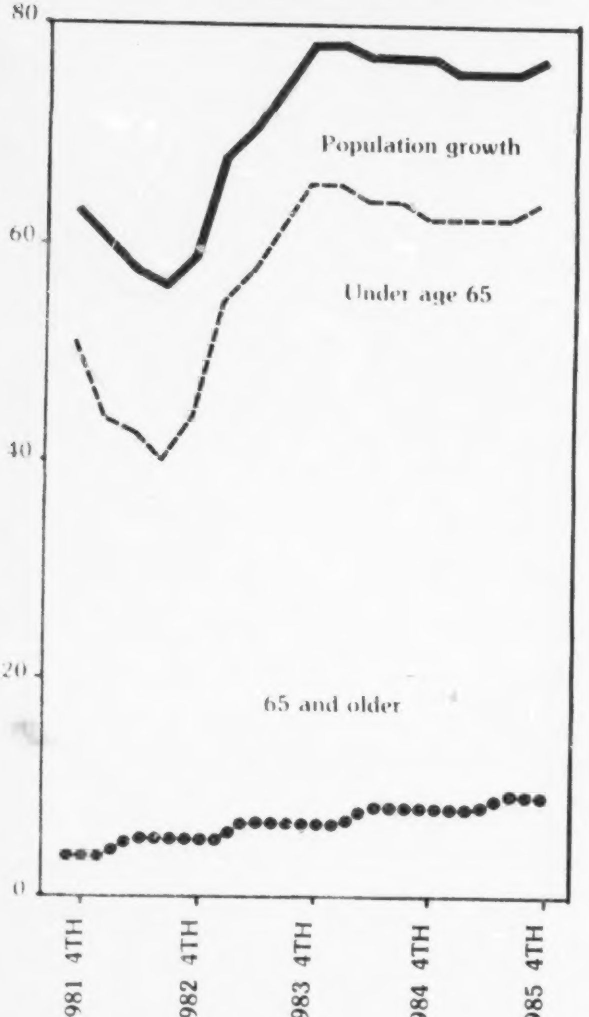
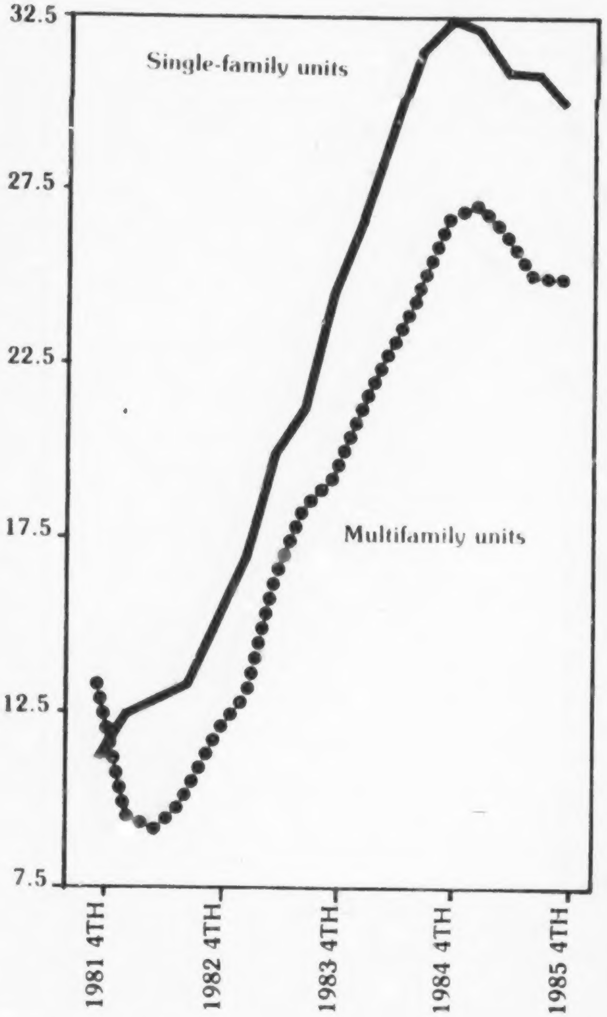


Figure 4. —Florida housing starts (in thousands, seasonally adjusted)



Finally, the previous cyclical peak for total housing starts was 195,000 in 1979. The forecast calls for starts to total 215,500 in 1984 and 227,400 in 1985, well above the previous cyclical peak. Although Florida's residential construction industry will be booming in 1984 and 1985, starts will not breach the all-time peak of 269,000 in 1973. Such a speculative boom is most unlikely now because lenders and investors are far more wary, population growth will not reach its 1973 peak, and with lower rates of inflation in place there is not the speculative demand for housing that there once was.

Tourism will continue to be a source of strength for Florida's economy, as it has since mid-1982. However, the current high levels of tourist visits, more than 39 million at annual rates, cannot be maintained during the first half of 1983 given the weak near-term prospects for the U.S. economy. Even though total visits may retreat some in early 1983, tourism will still be a source of strength. By mid-1983, the U.S. recovery should be in full swing and tourism will begin to expand again. However, the continued strength of the dollar will limit the growth in international tourism.

Total visitors are forecast to increase from 38.4 million in 1982 to 39.0 million in 1983 (see Table 4). More rapid gains are forecast for 1984 and 1985, as total visitors soar to 41.5 million and 43.3 million. A very slow rise in gasoline prices will enhance the prospects for tourist arrivals by car, but tourist arrivals by air are projected to grow even more rapidly.

The services and trade sectors were particular sources of strength for the Florida economy throughout the 1981-82 national recession. Each of these sectors added new employees throughout the recession, largely offsetting the declines in other areas. Both sectors serve Florida's tourists and population, and the outlook for tourism and population growth is bright. Thus, job creation in the services and trade sectors will accelerate throughout the forecast period.

The 1981-82 recession battered Florida's manufacturing industries. The recession reduced the level of economic activity in the U.S. and lowered the total demand for manufactured goods. Since substantial portions of Florida's manufactured products are produced for sale in the national economy, the recession also reduced the demand for Florida's manufactured goods. Florida producers of transportation equipment, paper, chemicals and electrical machinery were particularly affected. In addition, the recession also caused population growth to slow and housing starts to fall. As a result, the demands for manufactured goods such as stone, clay, glass and fabricated metals which are used in construction also declined. These forces combined to push manufacturing employment down 3 percent in 1982, with durable goods bearing the brunt of the contraction.

While 1982 was a tough year for manufacturing in Florida, the forecast is very bright. The national economy will mount a recovery in 1983, which will gain momentum and last through 1985. In addition, Florida's local markets will strengthen over the course of 1983, and population and housing starts are forecast to be at boom levels in 1984 and 1985. Thus, the very forces which depressed manufacturing activity in 1982 will stimulate it in 1983, 1984 and 1985.

Furthermore, the composition of Florida's manufacturing industries is well suited for rapid growth in the 1980s. Florida's manufacturing sector contains no automobile plants, tire makers or primary metals producers—industries which are in a long-term secular decline. Instead, the state's manufacturers are dominated by firms producing machinery (26 percent of the manufacturing total), particularly electrical machinery, which will grow very strongly. The rest of Florida's manufacturing sector is evenly distributed, as the data below indicate.

Composition of Florida's manufacturing industry

Manufacturing category	Percent of total
Apparel	**7.2**
Construction related	**10.4**
Food and tobacco	**11.1**
Machinery	**26.0**
Metals	**8.2**
Paper and chemicals	**14.0**
Printing and publishing	**11.1**
Transportation equipment	**12.0**

Figure 5. —Employment growth (in thousands, seasonally adjusted)

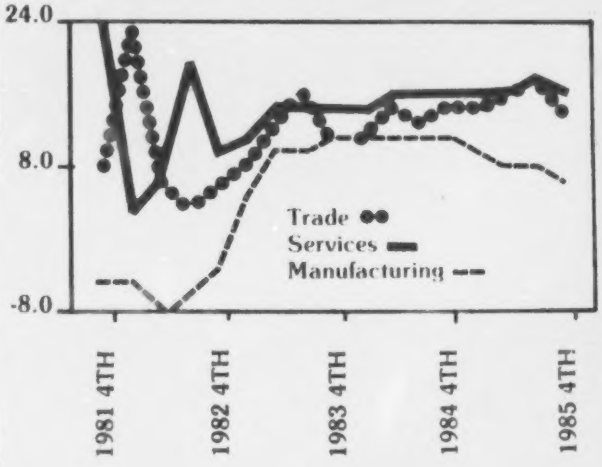


Figure 5 displays the forecast for employment growth in manufacturing and compares it to the forecasts for the trade and services sectors. Although the manufacturing sector is only half as large as the trade and services sectors, the manufacturing sector is projected to generate almost as many new jobs over the forecast horizon as its far larger counterparts.

Total nonagricultural employment equals the sum of the various employment categories. Nineteen eighty-three will be a year of recovery as the Florida economy generates an increasing number of new jobs each quarter. Employment growth accelerates from 2.2 percent in 1983:1 to 5.4 percent by 1983:3. Employment continues to expand in 1984 and 1985, posting gains of 4.7 percent and 4.6 percent, respectively.

As job creation accelerates, Florida's unemployment rate declines. The unemployment rate is quite volatile because it is determined both by the demand for labor and by its supply. It appears that the peak quarterly rate was reached in 1982:2 at 8.4 percent. The forecast calls for large numbers of new jobs to be created over the next few years; thus, unemployment will fall throughout the forecast period to average 6.3 percent in 1985.

Personal income is the sum of earnings, property income and transfers, minus payments for Social Security. The earnings component is the dominant element, and it depends on the growth in employment and wage rates. Personal income will grow by just 8.8 percent in 1982, a rather slow pace caused primarily by the weak performance of earnings. The 1983-85 period of booming growth in Florida will propel personal income upward by 11.0 percent in 1983, followed by gains of almost 13 percent in 1984 and 13.2 percent in 1985.

These gains in personal income are substantial and will exceed the forecast increases in prices by a wide margin. Real personal income is forecast to rebound from 1982's weak 2.8-percent gain to 5.2 percent in 1983. Increases of 6.8 percent per year are projected for 1984 and 1985.

An Update on the National Economy

Excerpts from a speech by:
Lawrence Kudlow

Associate Director
for Economics and Planning
Office of Management and Budget

The first dominant issue development in the U.S. economy in 1982 was the pervasive reduction of inflation, and I think quite surprisingly so. Very much a part of that good news is the unexpected length and amplitude of the recession, which I believe can be directly traced to the prior buildup of inflation.

It's safe to say that if economists really look back, no one anticipated correctly the full effect and cost of the adjustment from moving an economy of our size from a very rapid rate of inflationary growth to a much more moderate rate. Indeed, as the latest data suggest, most of the inflation indexes are running about 4 percent above the prior year. As recently as eighteen months or two years ago, inflation rates were running about 10 or 12 percent or even higher; so we have taken it down substantially. The costs have been quite substantial also.

We were looking at some estimates made in January and February, 1982, and noted the extraordinary error margins traced to all forecasts for 1982. The administration's projections were way off the mark. We underestimated the decline of inflation and overestimated economic growth. The Congressional Budget Office had estimates that were almost identical to the administration's, so they were in the same boat. We can't survey all of the many private forecasts, but we did go back and look at the blue chip indicators which I believe monitor some forty-five or fifty forecasts. We found that their consensus numbers were almost the same as those of the administration's and the Congressional Budget Office, which is another way of saying the economists were way off the mark in their projections for 1982. This is because none of us were able to fully understand the full effects of the adjustment process to lower inflation.

In particular, when these forecasts were made a year ago, nearly all anticipated a weak first half of 1982 but a recovery in the second half. We didn't get that recovery in the second half; indeed, economic conditions deteriorated, almost suggesting a second wave of recession. I would suggest that one of the big factors in the second wave of recession this past year, which was not projected correctly by the forecasting fraternity, was the very success we had not only on the inflation front but also in changing or moderating inflation expectations which were very pessimistic going into the beginning of last year. I believe that they continued to be pessimistic until perhaps sometime around the middle of the year.

"Disinflation environment" costly

The inflation numbers kept coming in on the low side. The Congress and the administration were able to put together a budget which did not solve our problems, but which I believe helped advance the process of deficit reduction and certainly helped curb the rising trend in prospective deficits. These developments, combined with a somewhat more relaxed monetary policy, helped people to make the adjustment from high inflation to a low-inflation environment, or what some now call a "disinflation environment."

However, as is always the case, there are costs. Inventories were taken down very sharply a second time. If you look at the inventory turnaround in the third and fourth quarters of 1982, you will be struck by a major change from an accumulation to disaccumulation. I don't believe anybody anticipated that kind of a change. Inventories were the big culprit in this recession. Indeed, the inventory runoff in this recession will be the worst in the post-World War II record. Surprisingly, the consumption sector held up pretty well. Also surprisingly, the housing sector held up well for a recession, falling by only 3 percent, which is a small decline in comparison with past years.

The trade sector, however, was hit very badly. The export sector lost much more ground in this recession than in the postwar experience, so it was principally inventories and trade which pulled the economy down. A factor related to the inventory switch and the change in inflationary expectations was simply that individuals and companies changed their strategies and outlooks, as they do to keep abreast of the situation. So, we found belt-tightening, and liquidity and solvency and balance-sheet concern the order of the day. We thought much of that had passed earlier in 1982, but it was not to be. Companies cut back sharply on capital spending appropriations and other operations. Real interest rates were high, liquidity was scarce and balance sheet concerns were very important. These cutbacks in business operations, of course, required major reductions of production and employment schedules and all the rest.

Individual savers and investors began to shift their portfolio strategies so that during 1982, certainly around the middle of the year, people sold commodities and tangible assets. Looking at the flow of funds data, you can see big reductions in the holdings of tangible assets dating back to the fourth quarter of 1981. There were very heavy declines in the first, second and third quarters of 1982, and instead, people began to shift into financial assets in this new disinflationary environment. So, the stock and bond markets were the recipients of a lot of cash. The new deregulated bank deposits were also the recipients of cash.

All of these saving and investment decisions, although very positive for the longer term, did, of course, cut out substantially from the volume of current consumption and investment in the short run in 1982. The data now coming in from the Commerce Department seem to corroborate these trends. I don't offer this as any excuse, because I have long argued that the number one problem in the U.S. economy in the seventies and early eighties was spiraling inflation. I believe that many of us have consistently felt that it would not be easy to turn this inflationary spiral around. Paul Volcker may have touched upon some of these themes; that there is no painless, cost-free adjustment. No matter what the occasional excessive traumas by government officials or whatever the rhetoric, the reality is much different. None of us in the economics profession really understood how tough it was going to be.

Basis for recovery seen

The flip side of all this is that we are beginning to generate a very sound foundation for future recovery. The reduction of inflation, as painful as it was not only from an economic standpoint but also from a budget revenue standpoint, sets the stage for a sustainable and durable recovery. The distortions and malinvestments that occurred in the seventies and early eighties now have essentially passed through the economy, or at least we are nearing the final stages. We look forward to better balance and, of course, that requires a constant vigilance on the inflation front. The administration is committed to do that, working with the Federal Reserve Board.

In terms of the 1983 economy, I believe we are going to see a pickup, with due humility in the wake of last year's forecasting performance. Our feeling was that any forecast from the government ought to err on the side of caution; that we ought to be as realistic and prudent as possible. Our sense is that we will

get improving levels of production and employment in the first half of 1983, and that the best guess is the second half of the year will be stronger and the momentum of recovery will pick up substantially. We may be wrong. We may be too cautious this year. Corporate profit margins are now beginning to turn upward. Cost pressures are less intense, and most of the cost cutting seems to be behind us, although management surely will be very tight in managing their cost structure. Many of the leading indicators of housing starts and so forth are beginning to turn upward. Commodity markets have stabilized, and even the long-term end of the bond market has given us some relief to convert short-term bank debt into longer-term bond obligations. I am optimistic about 1983, though caution is still the watchword.

Structural deficit problem to increase

Budget matters are equally difficult, if not more so. First, we have built into our budget estimates a recovery beginning in 1983 and expanding to the out-years of the current budget planning horizon, which is 1988. The recovery shows a trend growth of about 4 percent in real GNP, a gradual reduction of unemployment, moderate inflation and moderate interest rates. We are left with major deficit problems in each year of the planning horizon, even though we have built in a reasonably strong recovery and show the economy moving back to its path of potential output growth. This has been referred to as structural deficit, which says that if we get a pretty good recovery, the cyclical problems in the budget accounts (the increased spending for unemployment-related outlays and the rest, as well as the loss of tax revenues for lower profits and production) will move back to where they were earlier. However, we will still be left with an enormous gap between projected outlay and projected revenue despite the economic recovery.

In 1983 and 1984, the structural deficit is about a quarter to a third of the problem. By 1986, 1987 and 1988, the structural deficit is about half to three-quarters of the problem. On a current-services basis we would be running a structural deficit, without any additional policy changes, of more than $200 billion and in some cases (more than we would like to talk about), above $200 billion.

I raise this point first because there is a view that somehow we can grow our way out of this. Indeed, there is a related view, which is not a responsible one, that somehow we can rely on expansionary and inflationary federal policies to get the economy moving; artificially stimulating it to relieve the budget pressures. That kind of artificial stimulus will only breed more inflation, as I presume we have learned much to our pain in the last decade and especially in the last year or two. Even so, suppose we were to generate an even stronger recovery; we would still be left with this structural deficit problem.

Essentially, the problem comes from the enormous growth of some key entitlement programs of the 1970s: Social Security and Medicare. Social Security yields about $300 billion worth of spending in the out-years and Medicare about $125 billion. That is the biggest source of budgetary control problem we have. Since 1963, Social Security and Medicare combined grew at a 15-percent annual rate in nominal terms and a 9-percent annual rate in real terms. The real growth of those entitlements over that period compares rather unfavorably with the slightly more than 3-percent growth in real terms in the entire economy. We were living way beyond our means in that particular area. Those programs have moved from 3-percent GNP to more than 7-percent GNP, and they were underfunded. The largest source of revenue expansion in the U.S. budget came from payroll taxes, which I'm sure is no surprise. Even so, the increase in payroll taxes was unable to keep up with the increase in the benefits, so we found ourselves with a growing gap. In terms of the overall budget problem, that is the core.

Administration sets budget priorities

On top of that, the claim for military spending and national security investment has increased substantially. No matter that many people feel we can cut from the military budget, I believe that there is a large, mainstream consensus that we have to beef up our national security investment. As a percentage of GNP, we let the security side fall from about 9 percent in the fifties and sixties to less than 5 percent by late 1970s. The administration has said on many occasions that we want that to rise considerably in the next five or six years, and we are targeting something like 7.5 percent of GNP. This is crucial to the international geopolitical situation. Of course from the standpoint of a green eyeshade, it adds to the budget problem.

We have taken large steps to deal with the remaining parts of the budget: the "discretionary programs" in the nondefense area. This has been the source of the administration's best successes in the program for budget restraint. Nondefense discretionary programs grew in real terms at about a 10-percent rate in the 1970s. We cut it sharply in fiscal year 1982, and intend to cut it considerably more. Our current budget suggests that there will be a decline of 5 percent in real terms for those programs. Over the remaining years from 1983 to 1988, we are targeting a decline of 3 percent, which is a big turnaround from plus ten to minus three. This is an appropriate, responsible fiscal course in view of the many difficulties in the budget area, and especially in view of the additional claims coming from the military side. It is a redirection of budgetary priorities, and we have been upfront about this from day one. You will see a continuation of these trends.

Although there is a lot of discussion about taxes, the administration is proud to stay with its tax-rate reduction program to improve prospects for investment and capital formation. We will strongly support not only the third year of the tax-rate cut, but also the indexation of personal tax rates which is scheduled to begin in 1985. It's interesting to note, however, as a historical addendum that general revenues—apart from payroll taxes—as a percentage of GNP (taxes on corporate income, individual income, state, excise, etc.) actually have fallen since the middle 1960s. If you're interested in average tax rates in general revenues, the ratios ran about 15.5 percent in 1965, and have fallen to just below 15 percent by 1982. A half a percent off the nominal GNP, which is now running about $3,500 billion, is a fairly large amount. So, the general tax burden really has not gone up as much as some believe, although the social insurance or payroll tax burden has gone up. The combination of inflation and high tax rates is very damaging, hence the rate reduction and the indexation program. As a general funding matter, keep in mind that general revenues have not been growing at all in the last fifteen years.

Federal borrowing is an obstacle

That leaves us with an issue which is the toughest nut to crack. If the nation is committed to maintaining essentially the same structure of social insurance programs (Social Security, retirement and disability, Medicare and Medicaid, hospital costs and hospital insurance, and all the rest) without any major change in the programs, and at the same time, is committed to a big buildup in its national security investment posture, we have a big funding program which is not an academic issue. It will come back to haunt us if we don't do something about it.

Certainly in the out-years, not only prospective deficits but actual federal credit demands may well interfere with the financial markets, interest rates, investment plans and monetary policies unless we are able to achieve the necessary changes in the budget to improve this funding situation. I am particularly discouraged looking at the history of the past fifteen years on the matter of borrowing, because the gap between outlays and revenues on a current-law, current-services basis has been funded through borrowing time and time again. It is the great free lunch of the political interests, and tends to mask the true cost of these budgetary programs. However, it is not a free lunch, as we learned very painfully in recent years.

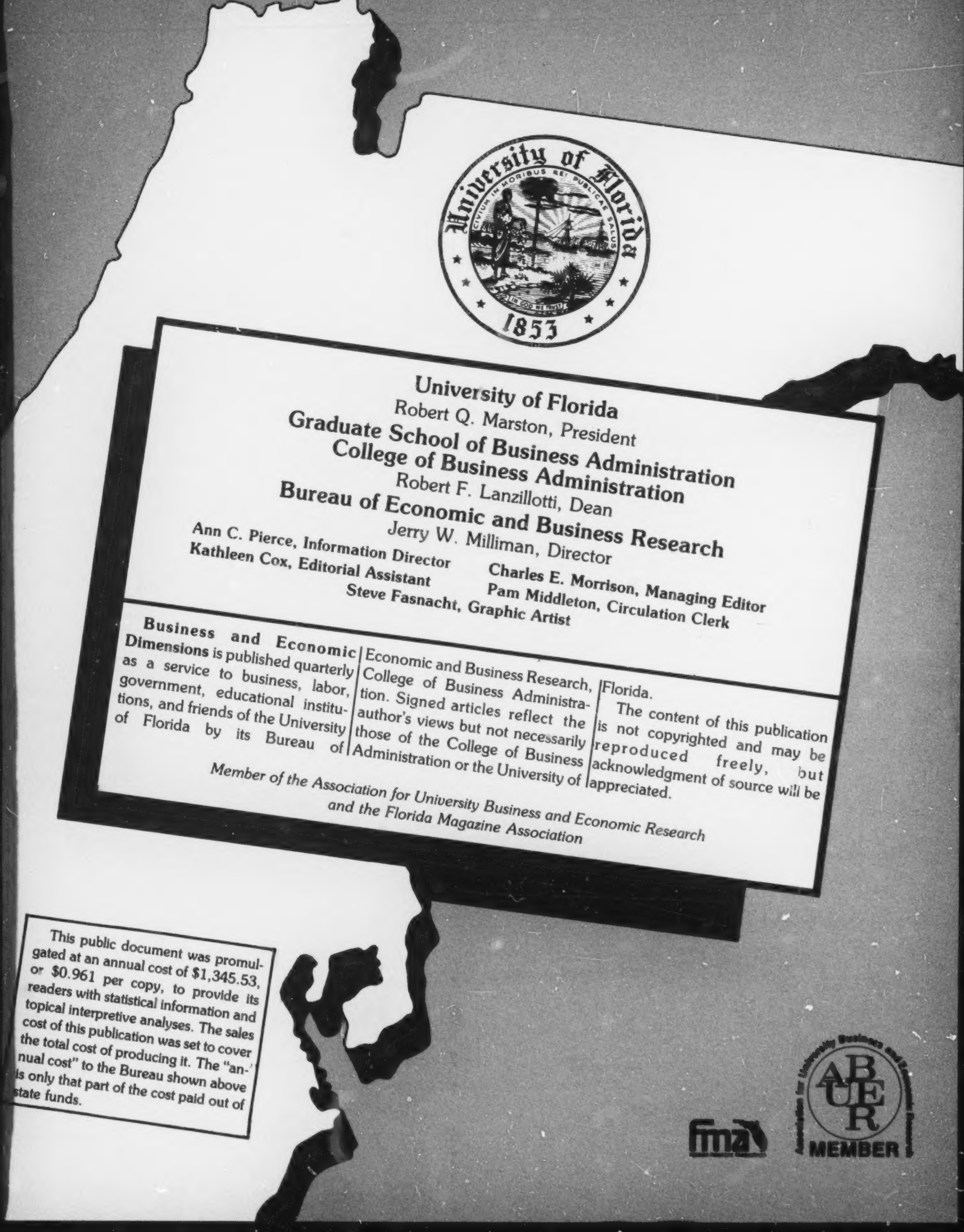
Heavy federal borrowing can crowd out and absorb necessary private savings that should be used for productive, plant-equipment investment rather than a lot of federal programs. Heavy federal borrowing suggests that the conduct of monetary policy will be complicated again and again. If we have slower growth because Uncle Sam is absorbing savings and capital, and if we have slower productivity and slower capital formation, then monetary policy in the 1980s will be called upon to generate the kind of economic advance that it really can't generate by itself, unless it gets the proper help from fiscal policy. I view the two as very closely related, and if the Federal Reserve Board is to make good on its objectives to keep the inflation rate down, then we have to give them some help on the fiscal side. This matter of federal borrowing is a serious question.

We will be proposing a number of structural reforms in the entitlement areas of Social Security and Medicare. We will also be proposing a partial freeze, which will include major reductions in nondefense discretionary programs and some of the small entitlements, and will also be proposing some reductions in the level and rate of growth of military spending. Lastly, we will propose some sort of tax trigger to make up for the shortfall in revenues unless, of course, the economic growth in the out-years turns out to be more robust. We will support strongly the third year of the tax cut scheduled for this July, as well as the indexation in 1985. Although I don't wish to go into the technical details of this trigger, it will not interfere with those tax rate reductions.

Progress on deficits to be gradual

The deficit question will be very substantial even after these reforms, so I caution you to expect progress but not miracles. It's going to be a gradual process of working these deficits down, and following through on the budget-restraint measures of the 1982 and 1983 budgets. In the 1984 budget, we will attempt to make additional progress and presumably, will follow through some more in the out-years. We don't know the Congressional response yet. Looking at last year's experience of bipartisan get-togethers between the White House and the Hill, between Democrats and Republicans, my hunch is that we will have similar kinds of bipartisan discussions and negotiations after we present our recommended budget. I am hopeful that six months from now we will have a first budget resolution, and a reconciliation and enforcement process that will advance considerably from the deficit predicament we are now looking at on a current-service basis. However, I also wish to underscore the magnitude and continuing nature of the problem, and the absence of any miracle cures that could get us out of this without any pain or compromise.

My last point is the matter of compromise. As somebody who was always critical of whatever the government did when I was in the private sector, and rightly so now that I've spent a couple of years in the public sector, I can only say that the easiest thing in the world is to stand pat and the toughest thing is to develop some kind of reconciliation or compromise. The only way we'll ever make any progress and reduce expectations with respect to deficits, and improve the investment in business in the economic environment, is to seek compromise and accord. The President has demonstrated that he is willing to compromise. We want to continue to reduce the size of government, open up the private sector with less interference from Washington and Uncle Sam, and hold down the inflation rate. It's going to require working together.



1853

University of Florida
Robert Q. Marston, President
Graduate School of Business Administration
College of Business Administration
Robert F. Lanzillotti, Dean
Bureau of Economic and Business Research
Jerry W. Milliman, Director
Ann C. Pierce, Information Director
Kathleen Cox, Editorial Assistant
Charles E. Morrison, Managing Editor
Pam Middleton, Circulation Clerk
Steve Fasnacht, Graphic Artist

Business and Economic Dimensions is published quarterly as a service to business, labor, government, educational institutions, and friends of the University of Florida by its Bureau of Economic and Business Research, College of Business Administration. Signed articles reflect the author's views but not necessarily those of the College of Business Administration or the University of Florida.

The content of this publication is not copyrighted and may be reproduced freely, but acknowledgment of source will be appreciated.

Member of the Association for University Business and Economic Research and the Florida Magazine Association

This public document was promulgated at an annual cost of $1,345.53, or $0.961 per copy, to provide its readers with statistical information and topical interpretive analyses. The sales cost of this publication was set to cover the total cost of producing it. The "annual cost" to the Bureau shown above is only that part of the cost paid out of state funds.

BUSINESS & ECONOMIC DIMENSIONS

Bureau of Economic & Business Research
College of Business Administration
University of Florida
221 Matherly Hall
Gainesville, FL 32611

Second class postage paid
at Gainesville, FL 32601
and Jacksonville, FL 32201

CHERYL WALDMAN
CONGRESSIONAL INFO SERVICES
4520 EAST WEST HIGHWAY
BETHESDA MD 20814

BUREAU OF ECONOMIC & BUSINESS RESEARCH
BEBR
UNIVERSITY OF FLORIDA

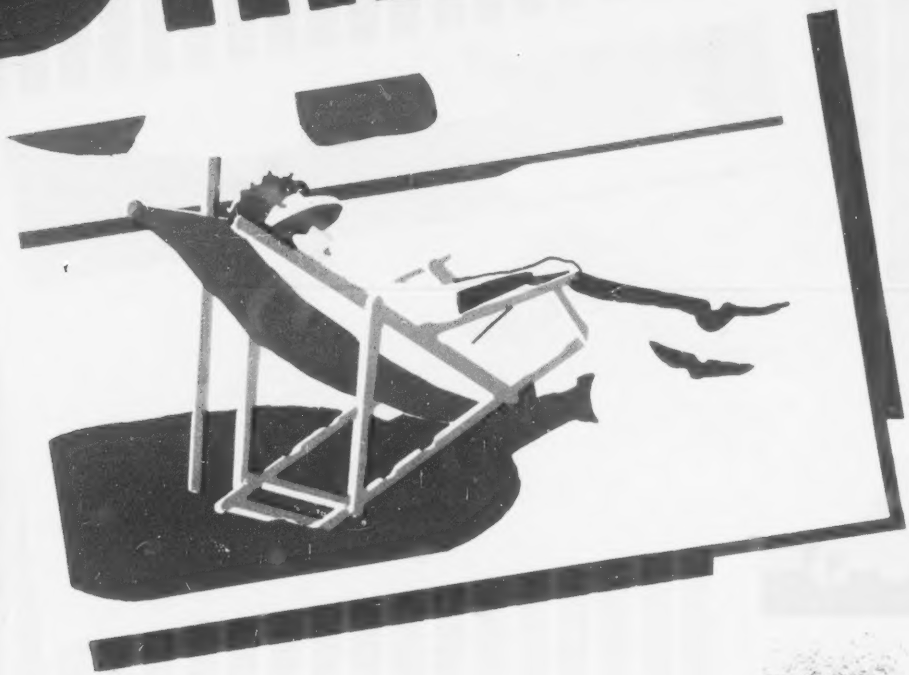
BEST AVAILABLE COPY

- 2/5/83 U6680-2 A -

ISSN 0007-6457

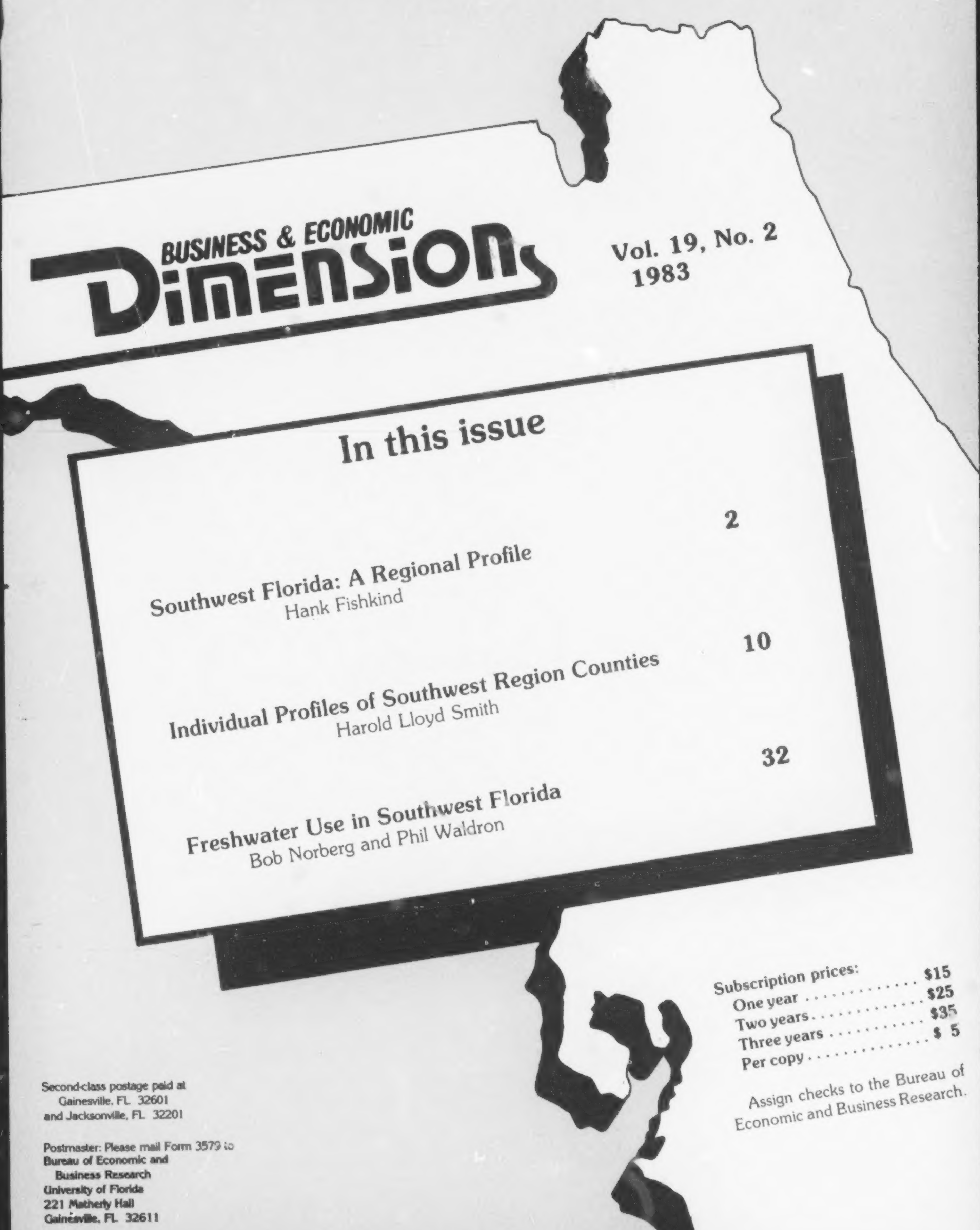
BUSINESS & ECONOMIC DIMENSIONS

II-1983



SOUTHWEST
FLORIDA

A REGIONAL PROFILE



BUSINESS & ECONOMIC
DIMENSION

Vol. 19, No. 2
1983

In this issue

Southwest Florida: A Regional Profile 2
Hank Fishkind

Individual Profiles of Southwest Region Counties 10
Harold Lloyd Smith

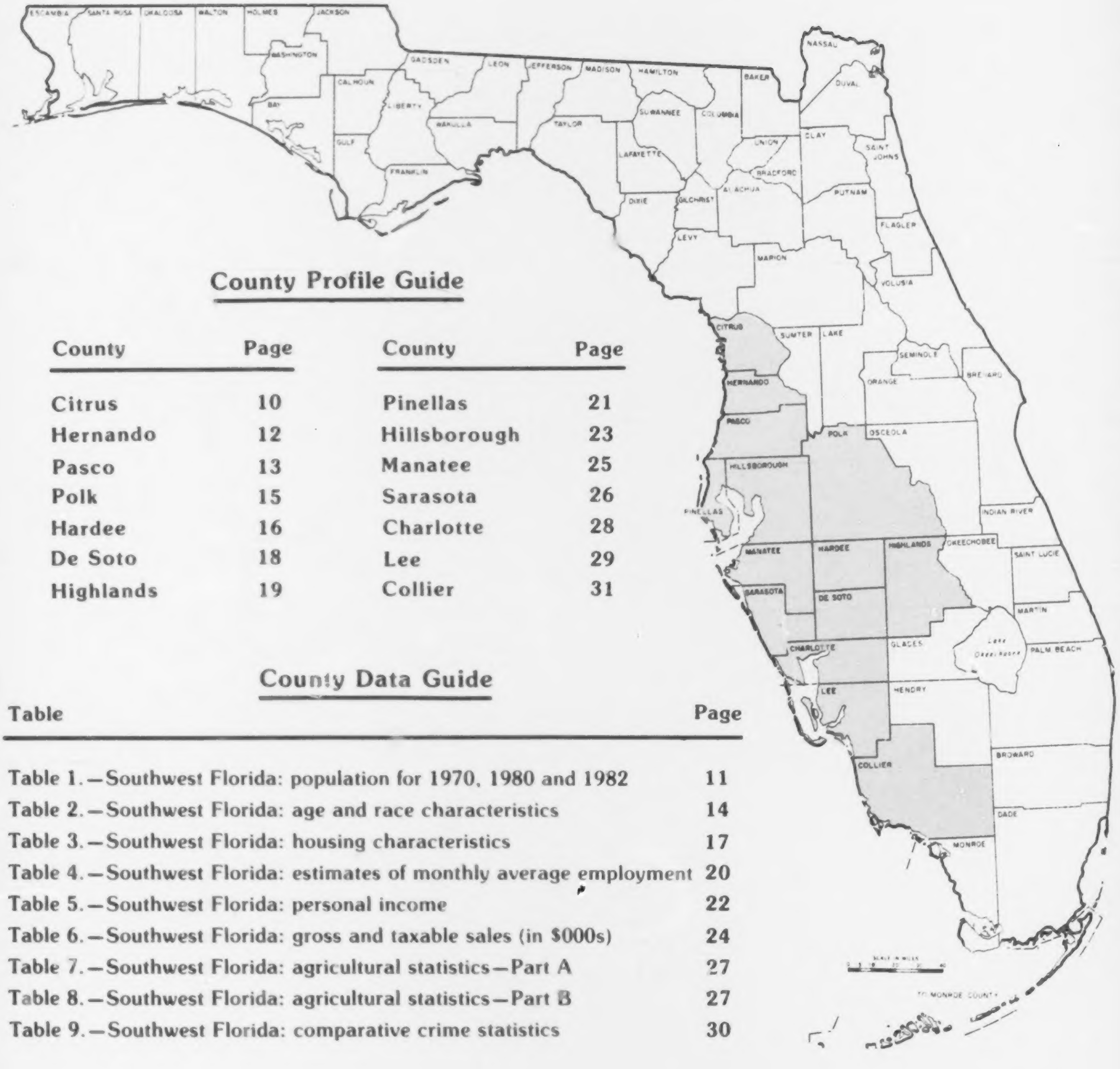
Freshwater Use in Southwest Florida 32
Bob Norberg and Phil Waldron

Subscription prices:	
One year	$15
Two years	$25
Three years	$35
Per copy	$ 5

Assign checks to the Bureau of Economic and Business Research.

Second-class postage paid at
Gainesville, FL 32601
and Jacksonville, FL 32201

Postmaster: Please mail Form 3579 to
Bureau of Economic and
Business Research
University of Florida
221 Matherly Hall
Gainesville, FL 32611


ESCAMBIA
SANTA ROSA
OKALOOSA
WALTON
HOLMES
JACKSON
WASHINGTON
BAY
CALHOUN
GADSDEN
LEON
JEFFERSON
MADISON
HAMILTON
LIBERTY
WAKULLA
TAYLOR
SUWANNEE
COLUMBIA
BAKER
NASSAU
DUVAL
GULF
FRANKLIN
LAFAYETTE
UNION
CLAY
SAINT JOHNS
BRADFORD
DIXIE
GILCHRIST
ALACHUA
PUTNAM
FLAGLER
LEVY
MARION
VOLUSIA
CITRUS
SUMTER
LAKE
SEMINOLE
ORANGE
BREVARD
HERNANDO
PASCO
POLK
OSCEOLA
HILLSBOROUGH
PINELLAS
INDIAN RIVER
MANATEE
HARDEE
HIGHLANDS
OKEECHOBEE
SAINT LUCIE
SARASOTA
DE SOTO
MARTIN
CHARLOTTE
GLADES
Lake Okeechobee
PALM BEACH
LEE
HENDRY
COLLIER
BROWARD
DADE
MONROE
SCALE IN MILES
TO MONROE COUNTY

County Profile Guide

County	Page	County	Page
Citrus	10	**Pinellas**	21
Hernando	12	**Hillsborough**	23
Pasco	13	**Manatee**	25
Polk	15	**Sarasota**	26
Hardee	16	**Charlotte**	28
De Soto	18	**Lee**	29
Highlands	19	**Collier**	31

County Data Guide

Table	Page
Table 1.—Southwest Florida: population for 1970, 1980 and 1982	11
Table 2.—Southwest Florida: age and race characteristics	14
Table 3.—Southwest Florida: housing characteristics	17
Table 4.—Southwest Florida: estimates of monthly average employment	20
Table 5.—Southwest Florida: personal income	22
Table 6.—Southwest Florida: gross and taxable sales (in $000s)	24
Table 7.—Southwest Florida: agricultural statistics—Part A	27
Table 8.—Southwest Florida: agricultural statistics—Part B	27
Table 9.—Southwest Florida: comparative crime statistics	30

SOUTHWEST FLORIDA:

A REGIONAL PROFILE

Hank Fishkind

Associate Director
Bureau of Economic and Business Research
University of Florida

Florida's southwest coast is one of the country's fastest growing regions. Between 1970 and 1982, almost 100,000 new people per year moved into the area, which even by Florida's lofty standards, is exceptional population growth. As the data in Table 1 demonstrate, five of Florida's ten-fastest-growing counties were in the Southwest region, including top-ranked Hernando County and Citrus, Charlotte, Collier and Pasco counties. Furthermore, even in terms of the absolute gains in population, southwest Florida ranks high, containing four of the state's top ten counties, which is more than in any other region. (See Table 2.)

The future promises continued rapid population growth in southwest Florida. The projections in Table 3 show the region's population growth accelerating through 1990 to a 3.7-percent-per-year pace. By 1990, more than 3.5 million people will be living in the region, or nearly 30 percent of the state's population.

Currently, the region is home to nearly three million Floridians, or 28.5 percent of the state's total population. Pinellas County, with 755,937 residents, is the most populous and densely settled county in the region. Hillsborough ranks second in population with 677,733, and together, Pinellas and Hillsborough account for half of the region's total population. Hardee County's population of 19,969 is the region's smallest, but is only slightly lower than De Soto's 20,153 residents.

Since 1950, the region has grown very rapidly, but the focus of growth has shifted from Pinellas, Hillsborough and Polk in the central part of the region to the coastal counties to the south and north. For example, Hillsborough accounted for 31 percent of the region's total population in 1950; Pinellas' portion was 20 percent; and Polk's share was 15 percent. By 1982, Pinellas held 25 percent of the total, while Hillsborough's share fell to 23 percent and Polk's dropped to 11 percent.

During the 1950s, the regional population growth of 5.4 percent per year outpaced the statewide rate of 3.9 percent. As growth accelerated along its south and north coasts, the fastest-growing counties in the region were: Charlotte (11.3 percent per year), Collier (9.3 percent), Pinellas (8.9 percent), and Lee (8.8 percent). The slowest increases were in the interior, and included: Hardee (2.1 percent per year), De Soto (2.4 percent), and Citrus (4.3 percent).

In the sixties, population growth was more rapid in Collier (9.2 percent per year), Charlotte (8.1 percent), Citrus (7.6 percent), and Pasco (7.5 percent). The slowest growth occurred in De Soto (1.1 percent per year), Polk (1.6 percent), and Hardee (1.9 percent).

Population growth during the seventies was strongest along the north coast. Citrus paced the region, growing at an annual rate of 11.0 percent, followed by Hernando (10.1 percent), Pasco (9.8 percent), and Collier (8.5 percent). The slowest rates of growth were in Hardee (2.7 percent), Hillsborough (2.8 percent), and Pinellas (3.4 percent). These trends are illustrated in Figure 1.

It is important to note that although population growth rates have slowed in Pinellas and Hillsborough counties, the absolute amounts of population gain in these counties continue to dominate the region's total. For example, between 1970 and 1980, the region's population increased by 977,250, with Pinellas' population jumping 206,202, and Hillsborough's increasing by 156,695. Together, they accounted for 37 percent of the region's total growth during the seventies.

The region's diversity is highlighted by the demographic makeup of its fourteen counties. In 1980, the 65-and-older age group constituted more than 30 percent of the population in three counties: Charlotte (33.9

Table 1.—Population growth rate, 1977-1982: ten highest ranking counties (in percentage)

County	Region	Annual growth
Hernando	SW	10.0
Flagler	CEN	8.5
Osceola	CEN	8.4
Citrus	SW	7.3
Charlotte	SW	7.1
Collier	SW	6.8
Pasco	SW	6.4
Gilchrist	NE	6.3
St. Lucie	SE	6.1
Martin	SE	6.0

Table 2.—Population gain, 1977-1982: ten highest ranking counties (in thousands)

County	Region	Gain
Dade*	SE	194.6
Broward	SE	145.1
Palm Beach	SE	141.4
Hillsborough	SW	72.1
Pinellas	SW	68.9
Lee	SW	56.7
Pasco	SW	56.2
Orange	CEN	55.8
Brevard	CEN	49.6
Volusia	CEN	46.5

*Note: Dade County's population increase is distorted by the influx of almost 120,000 Cuban refugees in 1980.

Source: Bureau of Economic and Business Research.

Table 3.—Population by region in Florida (in thousands)

	April 1, 1977	April 1, 1982	April 1, 1990		April 1, 1977	April 1, 1982	April 1, 1990
Southwest	2,500	2,958	3,552	Northeast	1,124	1,252	1,429
Annual percent change	3.6	3.4	3.7	Annual percent change	2.8	2.2	2.7
Percent of total	28.0	28.5	28.9	Percent of total	12.6	12.1	11.6
Southeast	3,237	3,788	4,410	Northwest	826	903	987
Annual percent change	4.0	3.2	3.1	Annual percent change	2.3	1.8	1.8
Percent of total	36.3	36.5	36.8	Percent of total	9.3	8.7	8.0
Central	1,233	1,474	1,783	Florida	8,920	10,375	12,304
Annual percent change	3.5	3.6	3.9	Annual percent change	3.3	3.1	3.5
Percent of total	13.8	14.2	14.5	Percent of total	100.0	100.0	100.0

Source: Bureau of Economic and Business Research.

percent), Pasco (30.7 percent), and Sarasota (30.0 percent). By contrast, those age 65 and older comprised just 11.4 percent of Hardee's population, 11.5 percent of Hillsborough's and 14.3 percent of Polk's.

The racial characteristics of the southwest counties are also quite different. For instance, nonwhites constitute 19.2 percent of De Soto County's population, 15.6 percent in Polk, 14.5 percent in Highlands and 14.2 percent in Hillsborough. These percentages compare to nonwhite population shares of 2.5 percent in Pasco, 2.6 percent in Charlotte and 3.6 percent in Citrus.

Housing

Regional housing trends largely mirror the population trends (see Figure 2). One particularly interesting characteristic of the region's housing stock is the large number of seasonal and occasional-use units and their rapid increase. In 1970, seasonal and occasional-use units constituted 3.4 percent of the region's housing stock, compared to 3.3 percent statewide. By 1980, these units amounted to 9.8 percent of the region's total compared to 7.0 percent statewide.

Collier County has the highest proportion of seasonal units in the region, with 24.4 percent, followed by Highlands (20.5 percent) and Charlotte (19.0 percent), and the smallest proportions are found in Pinellas (2.2 percent), and Hardee (4.3 percent).

The region's average household size of 2.43 compares favorably with the statewide average of 2.55. However, the region does exhibit some significant variation. For example, the counties with the largest average household sizes include: Hardee (3.05), De Soto (2.76), and Polk (2.70), while the smallest household sizes in the region are in Charlotte, Hillsborough and Sarasota, each with 2.25 persons per household.

Employment

Southwest Florida enjoyed a rapid increase in jobs between 1975 and 1981, when total nonagricultural employment grew at a 6.5-percent annual rate compared to 5.8 percent statewide. Nearly one-third of the one million

Figure 1.—Population growth, annual percentage change, 1970-1982

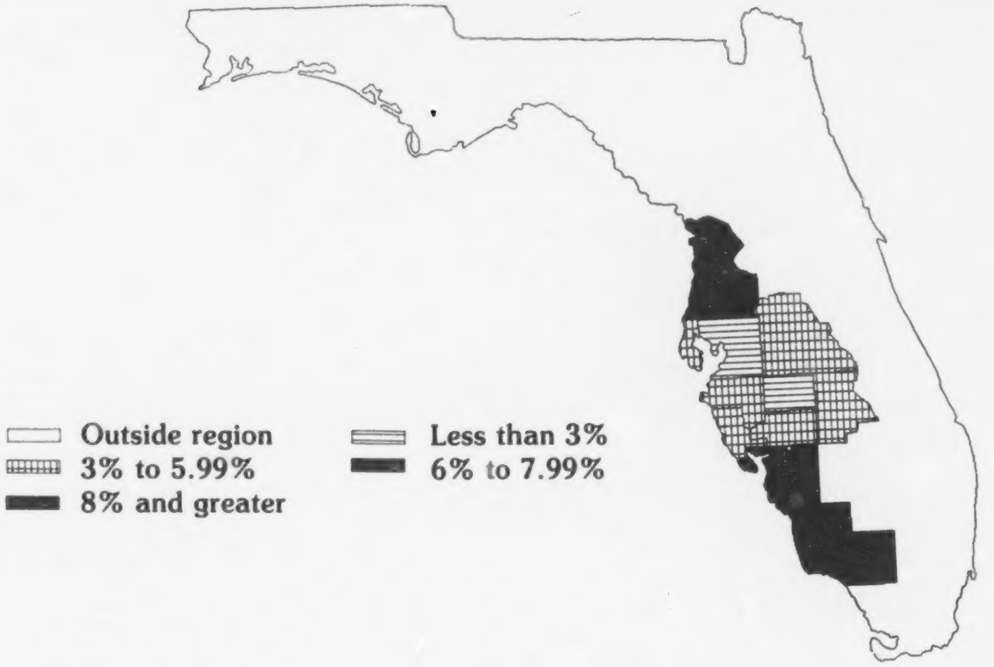
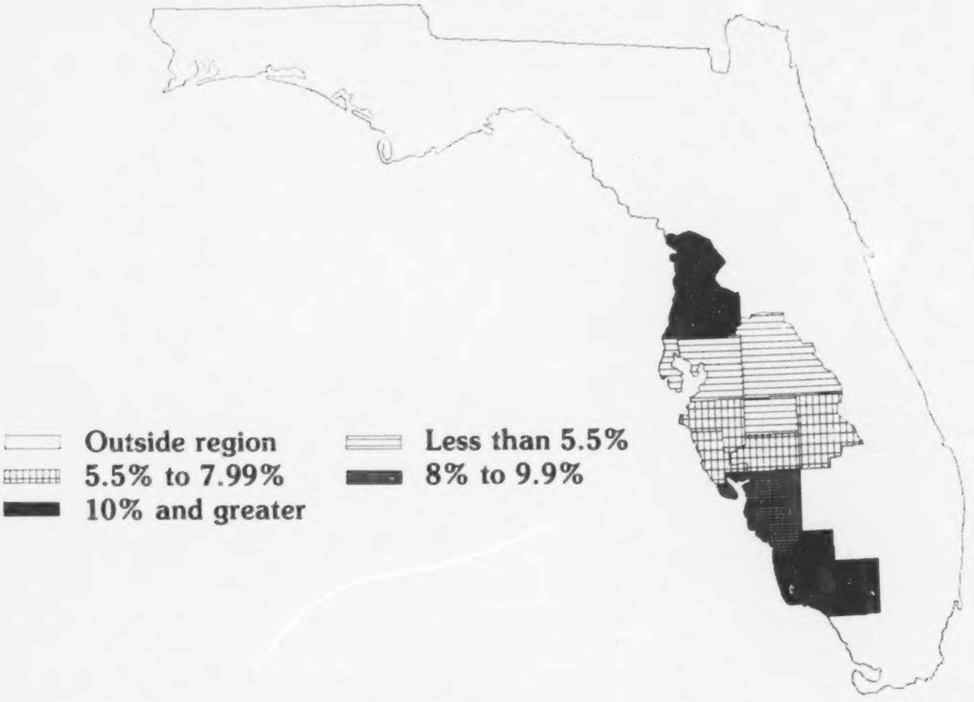

Outside region
Less than 3%
3% to 5.99%
6% to 7.99%
8% and greater

Figure 2.—Total housing units, annual percentage change, 1970-1980


Outside region
Less than 5.5%
5.5% to 7.99%
8% to 9.9%
10% and greater

new jobs generated by the Florida economy from 1975 to 1981 were in southwest Florida, and the region accounted for 26.5 percent of total nonagricultural employment statewide.

More than one-half of the region's total nonagricultural employment is concentrated in Hillsborough and Pinellas counties, with 1981 levels of 280,264 and 247,133, respectively. Polk's employment of 118,126 ranked third in 1981. Hardee and De Soto counties have the lowest employment totals, with 3,503 and 4,796, respectively.

As noted above, the southwest's employment growth was quite strong over the 1975-1981 period, but the expansion in employment was uneven across the region. As Figure 3 shows, the most rapid employment growth occurred in Citrus (13.0 percent per year), and Pasco (11.7 percent). The lowest rates of growth in total nonagricultural employment were in Hardee (4.5 percent per year), Polk (4.5 percent), and Hillsborough (5.1 percent).

Growth rates alone do not tell the whole story of employment growth. The largest numerical gains in new jobs between 1975 and 1981 occurred in Hillsborough (72,245), Pinellas (71,870), and Lee (31,963). The fewest new jobs were generated in Hardee and De Soto, with 1,031 and 1,156, respectively.

The region's employment composition is similar to Florida's. In both cases, manufacturing employs slightly more than 13 percent of the total. In the southwest, construction accounts for slightly more of the total (8.9 percent), than is true statewide (7.6 percent). The elevated importance of construction in the region's economy reflects the area's rapid rate of population growth, which requires a higher level of construction activity to keep pace with the demands for new homes, offices and shops.

The composition of employment varies significantly within the region. For example, in the northern and southern coastal counties, construction accounts for more than 10 percent of total nonagricultural employment. The rapid pace of population growth in these counties has created a huge demand for construction. As a result, 1981 construction employment accounted for 16.2 percent of Collier County's employment, 14.4 percent in Charlotte, 13.8 percent in Citrus and 13.1 percent in Lee. By contrast, in slow-growing De Soto and Hardee counties, construction employment provided just 1.9 and 3.2 percent of the jobs, respectively.

Manufacturing employment is concentrated in the central portion, where of the region's 125,795 jobs in this category, 39,080 are in Pinellas, 38,105 in Hillsborough and 22,790 in Polk.

Manufacturing accounts for 19.3 percent of all jobs in Polk County, which is one of the highest concentrations statewide. Other counties with substantial proportions of manufacturing jobs include: Manatee (17.0 percent), Pinellas (15.8 percent), and Hillsborough (13.6 percent).

Personal income

In 1970, the southwest region had a per capita personal income of $3,661, which was just 96.9 percent of the statewide average of $3,779. Only three counties in the region had per capita personal incomes above the statewide total: Collier at $4,846, Sarasota with $4,702 and Pinellas at $3,897.

By 1980 (the latest year with complete data), per capita income in the southwest reached $8,840, which was 98.2 percent of Florida's $8,993 average. As a result of the region's rapid increases in personal income during the seventies, five counties had per capita personal incomes that exceeded the Florida average. The counties ranked in order include: Sarasota ($11,287), Collier ($10,569), Pinellas ($9,643), Lee ($9,086), and Manatee ($8,933).

Within the region, 1980 per capita income figures varied widely. For example, the region's lowest per capita incomes are found in the rapidly growing northern coastal counties. Citrus has the lowest figure at $6,172, followed by Pasco with $6,376 and Hernando with $6,518. The highest per capita incomes are found in the southern coastal counties of Sarasota, Collier and Manatee. Figure 4 illustrates these differences.

The region's sources of personal income differ significantly from the statewide averages. In 1980, 20.3 percent of all personal income in the region was derived from transfer payments, compared to 17.3 percent statewide. Conversely, earnings constituted 59.7 percent of the region's personal income, while statewide earnings generated 65.7 percent of the total.

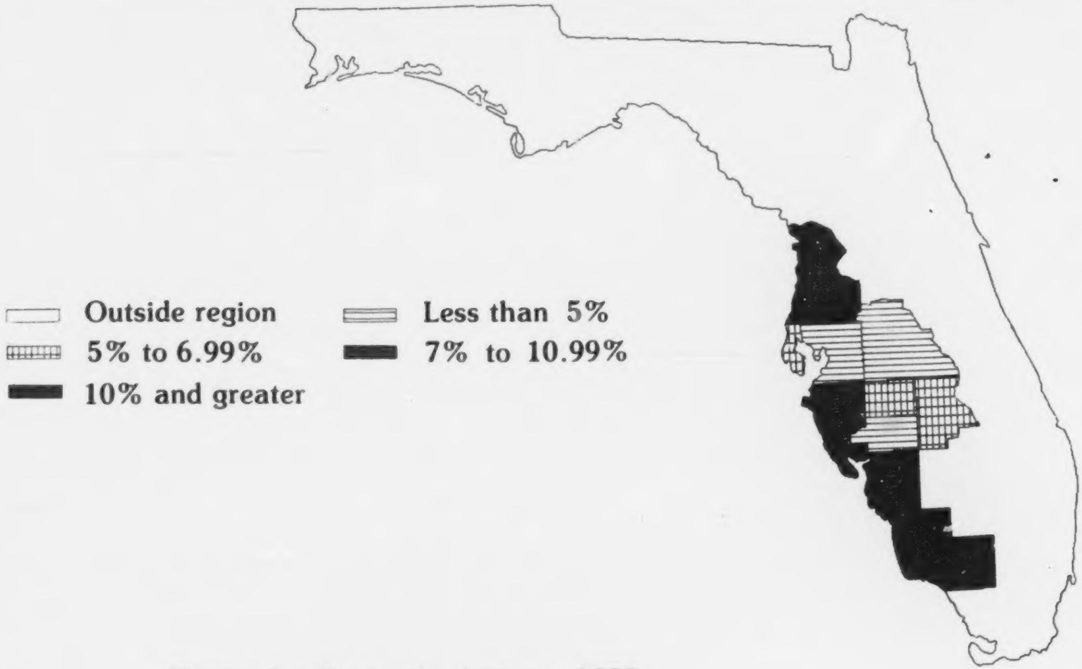


Figure 3.—Employment growth, annual percentage change, 1975-1981

Outside region
Less than 5%
5% to 6.99%
7% to 10.99%
10% and greater

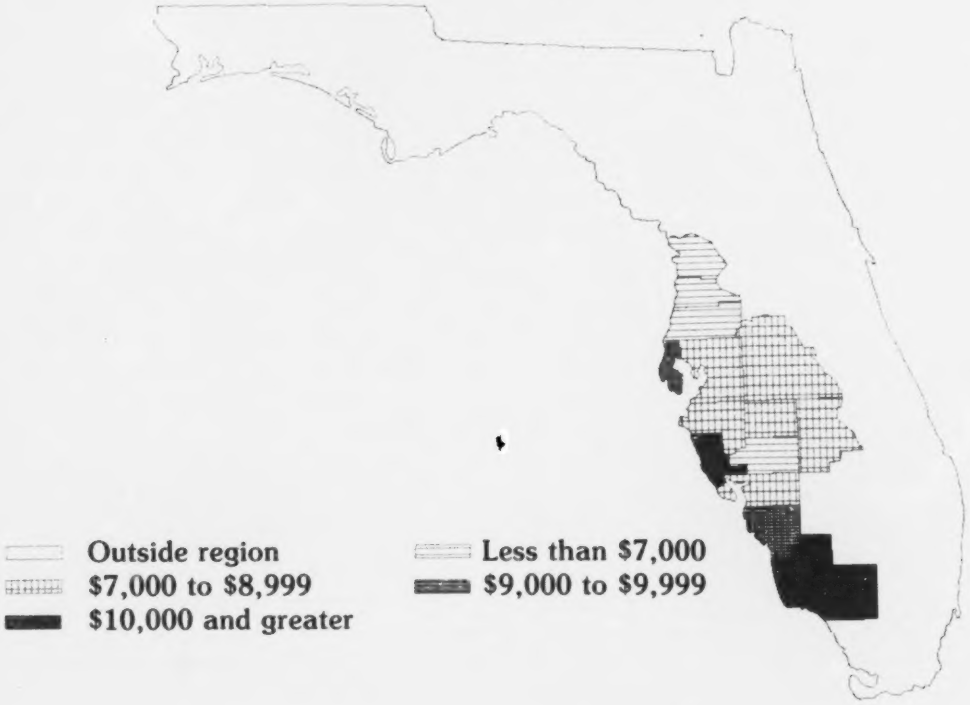


Figure 4.—Per capita income, 1980

Outside region
Less than $7,000
$7,000 to $8,999
$9,000 to $9,999
$10,000 and greater

These differences reflect the contrasts in the demographic composition of the region when compared to the state. The southwest has many more retirees than the rest of the state, and this group tends to receive more of their incomes from transfer payments, including pensions and social security, as well as from their investments. Thus, the proportion of their income that comes from labor activities is limited.

Once again, there were sharp differences among the region's counties in their sources of personal income. For instance, 82.0 percent of personal income in Hillsborough came from earnings. The figures for Polk (77.6 percent), Hardee (68.9 percent), and De Soto (67.2 percent) were also similar because each of these counties has relatively few retirees and more working-age people. By contrast, transfer payments make up more than 25 percent of total personal income in four counties: Pasco (31.3 percent), Citrus (31.7 percent), Hernando (27.9 percent), and Charlotte (28.4 percent).

Sales

Southwest Florida generated $39.0 billion in gross sales in 1982, accounting for 24.1 percent of the state total. The region's gross sales have grown rapidly between 1970 and 1980, increasing at an annual rate of 15.7 percent, compared to a 14.0-percent rate statewide. Over the last few recession-plagued years, the region's growth in sales of 9.6 percent still topped the statewide figure of 8.9 percent.

Hillsborough, Pinellas and Polk counties dominate the region's sales figures, generating gross sales in 1982 of $12.5 billion, $8.9 billion and $5.3 billion, respectively. The small inland counties of Hardee and De Soto provided the smallest amounts of sales—$161 million and $149 million, respectively.

Agriculture

The latest data available from 1978 show 4,276 farms in the region, or about 15.2 percent of the state's 28,706 farms. The region's farms contain 15.1 percent of the state's total farm land, and in 1978, they produced products worth $356.6 million, or 15.1 percent of the total value of Florida's farm marketing.

In 1978, Polk County's 657,364 farm acres accounted for 35 percent of the regional total. Manatee County ranked second with 403,553 acres, followed by Sarasota's 337,504. Pinellas County had the least farm acreage with just 16,112.

In addition to containing the most agricultural land, Polk County also produced the greatest share of the region's farm products, with its $271.6 million in 1978 accounting for almost 60 percent of the region's total. Hillsborough ranked second with $171.4 million, followed by Highlands ($74.9 million), and Pasco ($72.9 million). Figure 5 displays the data on agricultural production.

Rapid urbanization has reduced the farm acreage both regionally and statewide, from 1.9 million and 12.7 million acres, respectively, in 1969, to 1.8 million and 12.4 million acres, respectively, in 1978. These figures represent a 0.2-percent decline in farm acreage for the region and a 0.3-percent annual decrease for the state. It is interesting to note that although the southwest region grew more rapidly than the state, the region's farm acreage declined more slowly.

Crime

The overall crime rate in 1982 for southwest Florida was 5,582 per 100,000 people, which was well below the statewide rate of 7,494 per 100,000. In 1982, only one county in the entire region had a crime rate that exceeded the statewide average—Hillsborough County's 9,510 per 100,000. Figure 6 displays the crime rate data for the region.

Interestingly, the rapidly growing coastal counties in the north (Citrus, Hernando and Pasco), all have low crime rates, as does fast-growing Charlotte in the south. Rapid growth often stimulates crime, but apparently not in the southwest region.

Following this article are individual profiles of the fourteen counties in the southwest region. The profiles were prepared by Harold Lloyd Smith of the Bureau of Economic and Business Research staff. Additional support was provided by Bureau staff members Kimberly McCollough, who compiled the tabular data, and Neil Sipe and Pamela Schenker, who were responsible for the computer-generated maps.

Figure 5.—Agricultural productivity, market value ($000s)

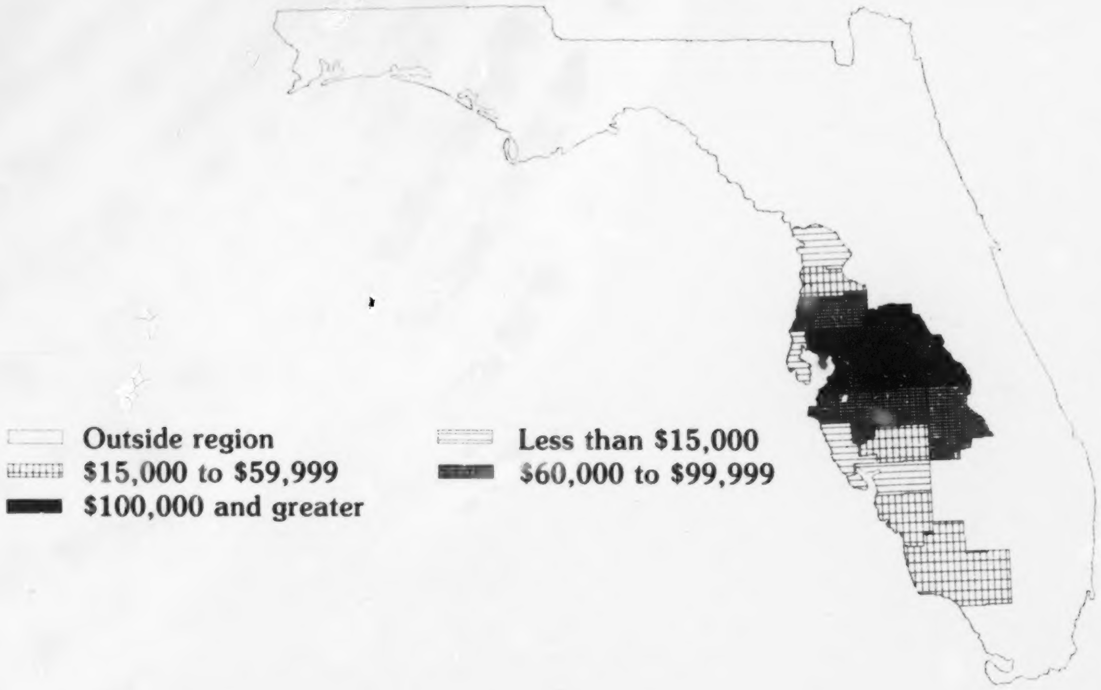
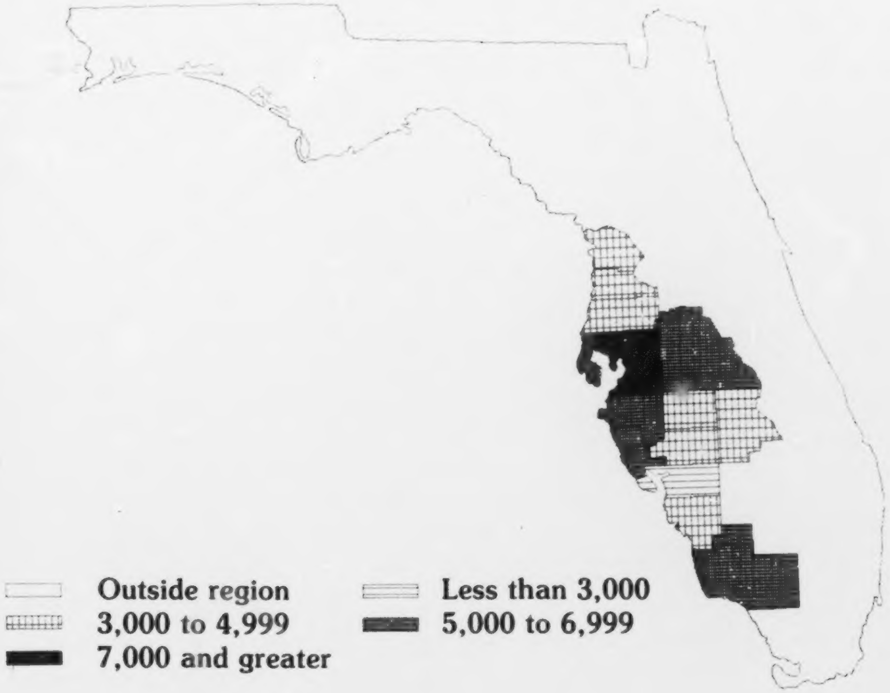

Outside region
Less than $15,000
$15,000 to $59,999
$60,000 to $99,999
$100,000 and greater

Figure 6.—Crimes, 1982 rate per 100,000


Outside region
Less than 3,000
3,000 to 4,999
5,000 to 6,999
7,000 and greater

The waters surrounding Crystal River in Citrus County are a favorite haunt of the manatee, an endangered species.

CITRUS

Created in 1887, Citrus County received its name because of the variety of wild fruit trees found by the area's pioneer settlers.

The county's annual population growth rate of 11.0 percent from 1970-1980 exceeded that of all counties within southwest Florida, and more than doubled that of the region and the state, which only managed growth of 4.4 and 3.7 percent, respectively, during the seventies. Estimates indicate a 6.7-percent increase during 1980-82, for a population of 62,307 in 1982, barely 2.0 percent of the region's total. All indications seem to imply a faster growth for Citrus County's population than for most counties in the region or the state.

Age and race characteristics indicate that whites comprised 96.4 percent of the county's population in 1980, a level that is six points higher than the 90.3-percent figure in 1970. The group age 65 and older increased its share of the population to 29.0 percent in 1980, up from the 26.0 percent it commanded ten years earlier.

Total housing units almost tripled from 9,769 in 1970, to 29,195 by 1980. Housing for seasonal and occasional use reached 3,787 units, or 13.0 percent of the 1980 total, but declined from the 16.1 percent it represented in 1970. This component of total housing grew at a slower 9.2-percent compound rate compared to the 11.6-percent rate of the total. Average household size decreased from 2.59 in 1970 to 2.36 in 1980, a trend similar to both the state and the region.

Nonagricultural employment grew at an annual rate of 7.6 percent over the period, more than twice as fast as the state and regional growth rates of 3.4 and 3.8 percent, respectively. However, manufacturing and construction now account for a lesser amount of nonagricultural employment than in 1975. This trend runs counter to the region and state, which both had increases in the percentage of nonagricultural employment accounted for by manufacturing and construction industries between 1975 and 1981.

Citrus County achieved a 20.8-percent annual growth rate in personal income that outpaced Florida's growth of 13.1 percent during the ten-year period from 1970 through 1980. Transfer payments as a share of personal income increased to 31.7 percent in 1980, up from the 25.5 percent accounted for in 1970, while the county's per capita income of $6,172 in 1980 indicates a 9.1-percent annual growth from its 1970 level of $2,586. Citrus' growth equaled the statewide rate during the period; however, the county's per capita income was the region's lowest in 1970 and 1980.

Citrus County's 19.9-percent increase in gross sales was exceeded by only three other counties in the region. This performance was also superior to the 15.7- and 14.0-percent change in the region and state, respectively, during the 1970-1980 period. The 17.7-percent increase in gross sales between 1980 and 1982 vastly outpaced all but Collier County's 19.3-percent rate. Similar statistics were found for taxable sales. However, the 11.5-percent growth rate in taxable sales between 1980 and 1982 was the best per-

Table 1.—Southwest Florida: population for 1970, 1980 and 1982

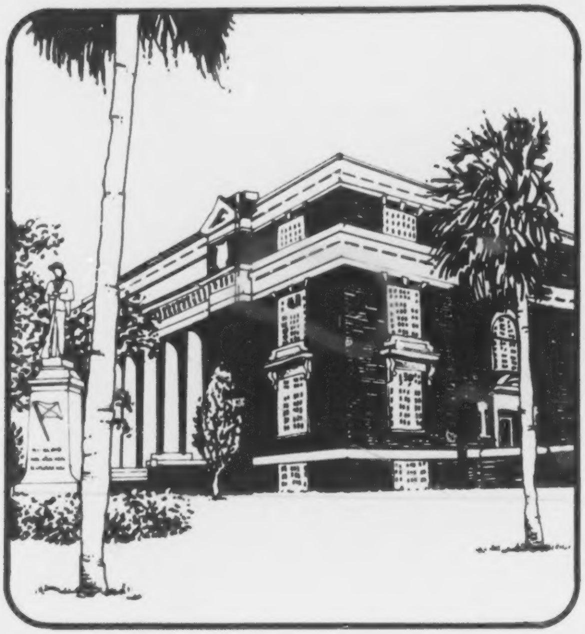
	1970		1980		1982*	
	Total population	Annual percent change 1960-70	Total population	Annual percent change 1970-80	Total population	Annual percent change 1980-82
Citrus	19,196	7.6	54,703	11.0	62,307	6.7
Hernando	17,004	4.3	44,469	10.1	52,973	9.1
Pasco	75,955	7.5	193,661	9.8	211,852	4.6
Polk	228,515	1.6	321,652	3.5	338,865	2.6
Hardee	14,889	1.9	19,379	2.7	19,969	1.5
DeSoto	13,060	1.1	19,039	3.8	20,153	2.9
Highlands	29,507	3.3	47,526	4.9	52,037	4.6
Pinellas	522,329	3.4	728,531	3.4	755,937	1.9
Hillsborough	490,265	2.1	646,960	2.8	677,733	2.4
Manatee	97,115	3.5	148,445	4.3	158,974	3.5
Sarasota	120,413	4.6	202,251	5.3	215,443	3.2
Charlotte	27,559	8.1	58,460	7.8	66,430	6.6
Lee	105,216	6.8	205,266	6.9	227,259	5.2
Collier	38,040	9.2	85,971	8.5	98,094	6.8
Region	1,799,063	5.4	2,776,313	4.4	2,958,026	3.2
State	6,791,418	3.2	9,746,420	3.7	10,375,330	3.2

*Bureau of Economic and Business Research estimates.
Source : U.S. Bureau of the Census.

formance in the region, and significantly outperformed Florida's 7.0-percent rate. All indications point to a slowing of both gross and taxable sales, a trend that prevails throughout Florida.

Total farm acreage has been slowly decreasing, and totaled 92,380 in 1978, down from 98,401 in 1969. The average farm size has been drastically reduced to 600 acres, approximately 38.4 percent below the average size of 974 acres in 1969. This decline was accompanied by a 52.5-percent increase in the number of farms, up from 101 in 1969 to 154 in 1978. The market value of these farm products exhibits an increasing growth rate throughout this period, almost tripling from $1.767 million in 1969 to $5.207 million in 1978. During the same period, the average market value of products per farm doubled from $17,494 in 1969, to $33,814 in 1978.

Reported crime declined 3.1 percent between 1981 and 1982, which contrasts sharply with the 17.9-percent annual rate of increase experienced between 1972 and 1981. Reported crimes per 100,000 people also showed a 7.9-percent decline over the last two years. Prior to 1981, the county had experienced a 7.2-percent annual growth in crime from 1972 to 1980. As with the total category, crimes per 100,000 people slowed from 4,478.4 to 4,126.3 between 1981 and 1982.



HERNANDO

The Hernando County Courthouse in Brooksville.

Carved from Alachua County in 1843 and named Benton, the county was later renamed Hernando in honor of the Spanish explorer De Soto.

During the seventies, Hernando County's population growth of 10.1 percent was surpassed only by Citrus County's 11.0-percent increase. Unlike Citrus, however, Hernando has been able to sustain a high level even into the early eighties. The 9.1-percent increase recorded by the county for 1980-82 significantly outpaces that of most other counties, and county population estimates for 1982 now stand at nearly 53,000.

Similar to regional and statewide trends, Hernando County's white population showed an increase between 1970 and 1980, rising to 93.3 percent of the total population, up from its 85.6-percent level of 1970. This gain more than halved the percentage of nonwhite population from 14.4 percent to 6.7 percent during the ten-year period. At the same time, those age 65 and older also increased their share of the population from 20.3 percent in 1970 to 24.4 percent by 1980.

Housing units in Hernando County climbed to 22,541 in 1980, a 189.9-percent increase over the 7,776 available in 1970. Despite this impressive gain, the number of units held for seasonal and occasional use actually fell from 11.7 percent of the total in 1970 to 11.3 percent by 1980. Smaller average household sizes were also evident in the county, falling from 2.77 in 1970 to 2.48 in 1980.

Total nonagricultural employment increased by 82.0 percent to 9,195 in 1981, up from 5,052 in 1975. Manufacturing and construction together accounted for 19.5 percent of the category's total in 1981, which was an upward trend from their 15.6-percent level in 1975. Construction was primarily responsible for this growth, moving up 3.7 percentage points in 1981 to 9.8 percent.

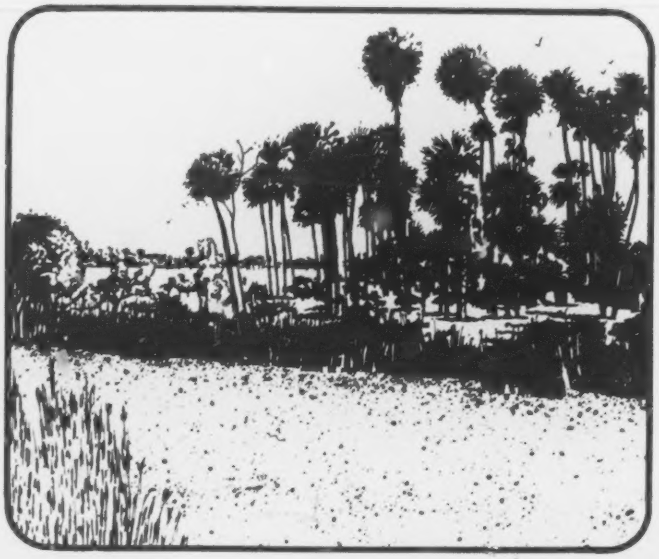
Personal income in the county grew at a respectable annual rate of 19.4 percent between 1970 and 1980, easily outpacing regional and statewide growth. Of significant importance among the changes in components of personal income is the drastic decline in earnings as a percentage of total income. This percentage fell to 42.7 percent in 1980, compared to 67.2 percent in 1970. During this same period, transfer payments increased its share of the total from 18.8 to 27.9 percent. Per capita income, however, was able to maintain a decent growth rate of 8.8 percent over the ten-year period and now stands at $6,518, but is still below the region's total.

The highest annual growth rate for taxable sales in the southwest region was credited to Hernando County, which achieved an impressive increase of 21.7 percent from 1970 through 1980. Gross sales rose at an annual rate of 21.8 percent over the same period, and was second only to Charlotte County's 22.2-percent rate within the region. Both of these categories have since slowed in growth, with gross and taxable sales registering 14.4-percent and 8.7-percent annual growth, respectively, between 1980 and 1982.

Total acreage allotted for farming in the county has shown a marginal increase of less than 1 percent from 1969 to 1978. The 67,189 acres used in 1969, supported 202 farms with an average size of 333 acres. By 1978, 67,710 acres were supporting 245 farms with a corresponding reduction in average size to only 276 acres. Market value of the products from these farms totaled $24.135 million by 1978, up from $12.205 million in 1969, a 14.9-percent annual growth rate. This increase was higher than all but one other county in the region. However, between 1974-1978, the value of these products remained virtually unchanged and only managed a regional-worst annual increase of 0.3 percent. The trend is also reflected in the average market value of farm products, which increased annually by 17.6 percent from 1969 through 1974, but since has decreased by 7.7 percent up to 1978.

Total crimes have shown a yearly increase of 16.9 percent between 1972 and 1981, up from 533 to 2,173. By the end of 1982, this rate was actually slowing at a 15.2-percent rate. Unlike the majority of the other counties in the region, crimes per 100,000 inhabitants increased by 6.1 percent between 1981-82; however, this rate was lower than the 6.6-percent rate experienced between 1972-81.

PASCO



Areas of tidal marshland that once dominated Florida's west coast are still a part of Pasco County's Gulf of Mexico coastline.

Created as Florida's forty-fifth county in 1887, Pasco County was named for Samuel Pasco, a former Speaker of the Florida House of Representatives and United States Senator.

A 9.8-percent yearly increase in population from 1970-1980 has moved Pasco County to sixth place among southwest region counties. Pasco's growth rate is more impressive than any other highly populated county within the region, and is shadowed only by Citrus and Hernando, which are two much lesser-populated counties. However, between the most recent years of 1980-82, growth has slowed to 4.6 percent. This rate is still superior to the region's total, which was also identical to the statewide 3.2-percent growth rate over the same two-year period.

Pasco County in 1980 had the largest percentage of white population among counties in the region. Ranked second in this aspect in 1970, with whites accounting for 94.8 percent of the total population, Pasco in 1980 increased that amount to 97.5 percent. Interestingly, the percentage of the population age 65 and older actually decreased to 30.7 percent from the 31.6 percent registered in 1970.

The percentage of total units set aside for seasonal and occasional use almost tripled between 1970 and 1980, from 4.4 to 12.1 percent. Only 1,527 units were in this category in 1970, increasing to 12,203 by 1980, for a compound growth of 23.1 percent. Total units managed an 11.2-percent yearly growth during the ten-year period. Average household size has followed the general pattern and receded to 2.34 in 1980, down from 2.46 in 1970. Corresponding to its population growth, Pasco now ranks sixth in total housing units among counties in the southwest region.

Although experiencing a reduction in the contribution made by combined manufacturing and construction industries to nonagricultural employment, Pasco County still managed an 11.7-percent yearly increase in this category. Manufacturing employment fell from 15.7 percent of the category's total in 1975 to only 9.0 percent by 1981. Employment in construction moved in a more favorable manner, and increased its contribution from 8.3 to 10.3 percent between 1975 and 1981.

Transfer payments of $47.458 million amounted to 22.6 percent of personal income in 1970. By 1980, the $387.801 million allotted to transfer payments had actually increased its percentage of total personal income to 31.3 percent. During the same period, earnings as a percentage of total income decreased from 41.5 to 37.8 percent. The increase in transfer payments cannot be attributed merely to retirement benefits for those age 65 and older, since this group is now on the decline. Total income now exceeds $1.2 billion, seventh highest in the region, and represents a 19.5-percent annual

Table 2.—Southwest Florida: age and race characteristics

	1970			1980		
	Percent age 65+	Percent white	Percent nonwhite	Percent age 65+	Percent white	Percent nonwhite
Citrus	26.0	90.3	9.7	29.0	96.4	3.6
Hernando	20.3	85.6	14.	24.4	93.3	6.7
Pasco	31.6	94.8	5	30.7	97.5	2.5
Polk	12.6	82.6	17.4	14.3	84.4	15.6
Hardee	9.9	90.6	9.4	11.4	91.3	8.7
DeSoto	15.6	79.8	20.2	16.2	80.8	19.2
Highlands	20.7	79.1	20.9	26.3	85.5	14.5
Hillsborough	10.4	86.1	13.9	11.5	85.8	14.2
Pinellas	29.4	91.6	8.4	27.8	91.8	8.2
Manatee	30.1	88.0	12.0	27.1	90.6	9.4
Sarasota	28.6	93.0	7.0	30.0	94.3	5.7
Charlotte	35.0	97.1	2.9	33.9	97.4	2.6
Lee	18.7	88.3	11.7	22.3	91.6	8.4
Collier	14.0	91.3	8.7	19.0	94.2	5.8
Region	20.8	88.5	11.5	22.0	90.2	9.8
State	14.5	84.3	15.7	17.3	85.4	14.6

Source : U.S. Bureau of the Census.

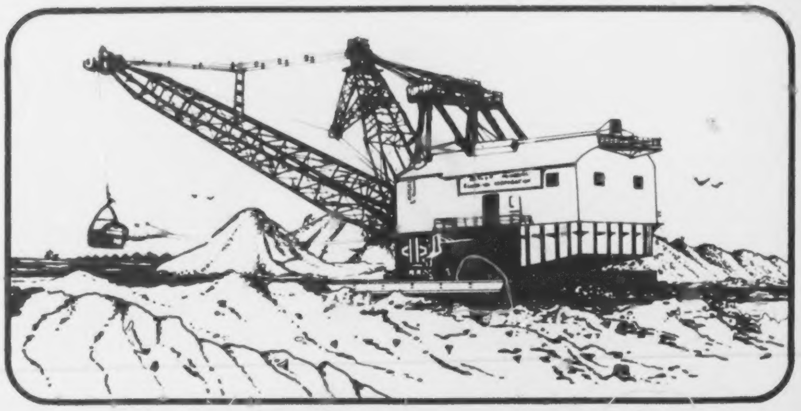
growth rate from the $0.2 billion figure in 1970. Per capita income stood at $6,376 in 1980, up from $2,683 ten years earlier, but is still significantly below the regional or statewide levels of $8,840 and $8,993, respectively.

Gross sales showed a healthy growth of 18.9 percent per year during the 1970-80 period, exceeding the regional and statewide totals. This rate slowed to 11.3 percent between 1980-82. Gross sales topped $1.3 billion in 1982, up from $195 million in 1970, while taxable sales lagged behind with a 15.5-percent rate from 1970 to 1980. Most recent trends indicate a slower growth rate, with an annual change of 8.3 percent for the 1980-82 period. However, both rates exceed statewide or regional levels during the same period. Taxable sales now stand at $767.5 million in 1982, up from $154.8 million in 1970.

The number of farms in Pasco County has steadily increased from 645 in 1969 to 783 in 1978. Total acreage available for farming has slowly decreased from 313,543 in 1969, to 294,967 in 1978. Correspondingly, the average farm size has decreased to 377 acres in 1978, down from 486 acres in 1969.

The market value for farm products has shown a healthy growth rate of 6.8 percent from 1969-74, increasing to 11.3 percent from 1974-78. Despite reasonable growth, Pasco County failed to match the combined growth of the region, where total market value exceeded $456.6 million in 1978, up from $180.2 million in 1969. Although the number of farms had increased between 1969-78, the average value of products per farm increased from $53,100 to $93,100.

Total reported crime reached a level of 8,722 by 1982, a 3.2-percent increase over the 8,454 figure of 1981. The 1982 total represents 5.3 percent of all crimes reported in the region, up from the 3.1 percent the county accounted for in 1972. Crimes per 100,000 inhabitants turned down by 1982, resulting in a negative change from 1981-82. Even though this change is only −0.4 percent, it is still an improvement. The annual change from 1972-81 had reached an 8.9-percent increase.



Phosphate mining has traditionally been a large factor in Polk County's economy.

POLK

Polk County was created in 1861, and named for James K. Polk, the country's eleventh president.

The county's population is ranked third in the region, with 338,865 inhabitants. The relatively high population level is partially responsible for the small percentage changes. Polk County consistently has recorded slower growth rates from 1980-82, when compared to Florida or the region. However, the county, which accounted for 12.7 percent of the region's total population in 1979, now accounts for a lesser 11.5 percent in 1982.

The 65-and-older age group increased its share of the county's population from 12.6 percent in 1970 to 14.3 percent in 1980. The percentage of white population moved from 82.6 percent to 84.4 percent over the same period, almost identical to the 1.7-percentage-point change in the 65-and-older age group.

Ranked third in housing units, Polk had 134,873 available units by 1980, up from 81,244 in 1970. This increase represented a 5.2-percent gain at an annual rate. Units slated for seasonal and occasional use increased significantly from 2.4 percent of the total in 1970 to 7.7 percent by 1980. Growth in these units, from 1,969 in 1970 to 10,331 in 1980, represented a whopping 18.0-percent compounded growth rate. Average household size shrank from 3.05 to 2.70 during the ten-year period, a trend that remains consistent with other counties, the region and the state.

Manufacturing and construction industries still account for greater than one quarter of the county's total nonagricultural employment. By 1981, these two categories accounted for 27.8 percent, down slightly from 28.1 percent in 1975. The decline in the combined total was due to a decrease in the construction industry's contribution to nonagricultural employment from 9.1 percent in 1975 to 8.5 percent in 1981.

Personal income in 1980 passed $2.6 billion, for a 13.3-percent growth rate from 1970 to 1980. Per capita income increased to $8,186, up from 1970's level of $3,294, but still remained below the regional figure in 1980. Transfer payments of $415.9 million in 1980 accounted for 15.8 percent of the county's total income, which represents an increase from the 1970 figure of $94.3 million that was 12.4 percent of total income.

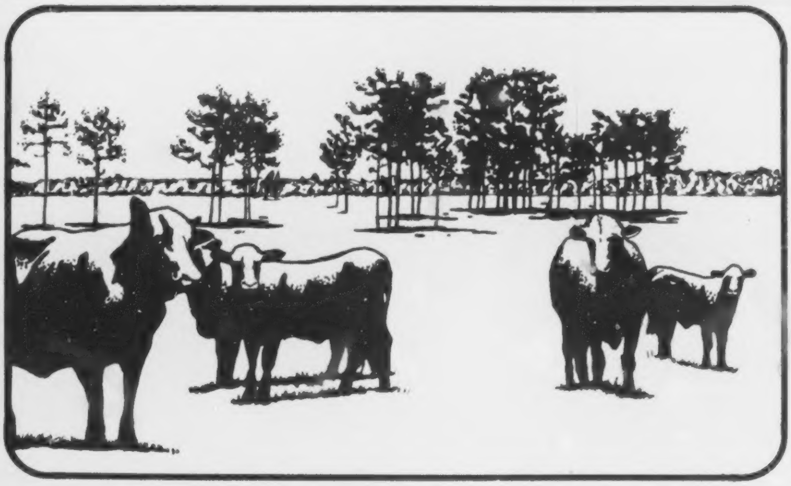
Gross sales of $5.3 billion generated by Polk County translate into 13.6 percent of the region's total. This category has grown by a 17.6-percent annual rate between 1970-80, but has since slowed to 5.8 percent between 1980-82. After outperforming the region during the seventies, Polk's gross sales have been lagging behind the region's growth rate since 1980. Taxable sales are fast approaching the $2.0-billion mark, attaining $1.97 billion in 1982, and accounting for 11.1 percent of the region's total. Similar growth trends were observed for taxable sales as were noted for gross sales, with the county's 14.2-percent rate outperforming the region's 13.2-percent growth from 1970-80. Most recent trends reveal that the reverse is now true for 1980-82, with the regional growth of 7.4 percent surpassing the 5.3-percent rate posted by Polk County.

Polk County continues to dominate the region's farming industry, controlling more than 657,000 acres or 35 percent of the available 1.88 million acres within the region in 1978. The county contained 1,800 operating farms in 1978, just up from 1,748 in 1969. Total acreage, however, had decreased from nearly 800,000 to less than 658,000. As expected, the average size of farms operating in 1978 was smaller than previous years, falling from 457 acres in 1969 to 365 acres in 1978.

Polk's farm products, which were valued at $271.6 million in 1978, represented 59.5 percent of the region's total. The market value of the county's farm products had been growing at a 7.7-percent rate from 1969-74; however, the rate increased significantly from

1974-78 to 18.7 percent. The region's trend toward more farms with smaller acreage, but also a higher average market value of products per farm, was evident in Polk County. Average value per farm reached $150,915 in 1978, ranking a relatively close fifth in the region. This ranking represents an impressive performance in light of the number of farms operating within the county, and it is 41.3 percent greater than the regional total of $106,780.

After having nearly 24,000 reported crimes in 1981, the county has shown some improvement and has pushed that total down to 22,816 by 1982. Crimes per 100,000 people also showed an improving trend at 6,733.1. The 1981-82 change indicates a 6.9-percent reduction in this area.



Hardee County's vast open spaces help support Florida's large cattle industry.

HARDEE

One of four entities established by a massive division of De Soto County in 1921, the county was named for then-Florida Governor Cary Hardee.

Hardee is the least populous of the counties within Florida's southwest region, with estimates for 1982 indicating almost 20,000 residents. This figure represents a 1.5-percent annual change from the 1980 total of 19,379, and gives Hardee the region's slowest population growth.

In 1980, the county had a regional low of 11.4 percent of its population in the group age 65 and older, but this figure is still an increase over the 1970 level of 9.9 percent. The percentage of white population has increased less than 1.0 percent during 1970-80, from 90.6 percent to 91.3 percent.

In spite of a yearly 4.0-percent growth in total housing units between 1970-80, Hardee ranks fourteenth among all counties in housing units available in 1980, with a total of 7,060 units. Units for seasonal and occasional use over the ten-year period increased from 210 to 306, but as a percentage of the total, the figure fell from 4.4 to 4.3 for 1970 and 1980, respectively. Average household size receded from 3.36 in 1970 to 3.05 by 1980. Even with this reduction, Hardee has maintained the highest average household size in the region, and is the only county to average more than three persons per household.

Together, manufacturing and construction industries have maintained their 14.8-percent contribution to nonagricultural employment from 1975 to 1981, while these industries increased their contribution to regional employment during the same period. Hardee's nonagricultural employment has grown at an annual rate of 6.0 percent between 1975-81, which is just below the region's 7.0-percent rate. Of the 14.8-percent total mentioned above, manufacturing accounted for 11.4 percent in 1975 and 11.6 percent in 1981.

Per capita income, which stood at $2,801 in 1970, increased approximately 10 percent annually to attain a fairly respectable level of $7,233 by 1980. Although still below the region's level of $8,840, Hardee's growth is just faster than the region's 9.0-percent rate and is therefore improving on per capita income. Transfer payments of $4.8 million represented 11.5 percent of the total in 1970, but soared to $20.4 million in 1980 and represented 14.5 percent of total personal income. Earnings, on the other hand, decreased from 71.3 percent of total income in 1970 to 68.9 percent in 1980.

Gross sales totaled $161.4 million by 1982, keeping Hardee next to last in this category. The 1970 total of $27.9 million was the lowest among all counties. Growth in this category between 1970-80 attained a 17.6-percent annual rate, but has now slowed to a 6.8-percent rate between 1980-82. The county's taxable sales of $63.1 million were

Table 3.—Southwest Florida: housing characteristics

	1970				1980			
	Total housing units	Seasonal and occasional use		Average household size	Total housing units	Seasonal and occasional use		Average household size
		Units	Percent of total			Units	Percent of total	
Citrus	9,769	1,575	16.1	2.59	29,195	3,787	13.0	2.36
Hernando	7,776	909	11.7	2.77	22,541	2,549	11.3	2.48
Pasco	34,816	1,527	4.4	2.46	100,846	12,203	12.1	2.34
Polk	81,244	1,969	2.4	3.05	134,873	10,331	7.7	2.70
Hardee	4,801	210	4.4	3.36	7,060	306	4.3	3.05
DeSoto	4,095	131	3.2	3.03	7,458	799	10.7	2.76
Highlands	12,547	965	7.7	2.78	25,994	5,325	20.5	2.43
Pinellas	168,555	1,067	0.6	3.02	263,619	5,834	2.2	2.66
Hillsborough	228,771	5,361	2.3	2.43	377,052	29,969	7.9	2.25
Manatee	42,841	1,776	4.1	2.50	83,588	11,142	13.3	2.36
Sarasota	56,242	3,691	6.6	2.44	113,355	14,560	12.8	2.25
Charlotte	13,572	1,071	7.9	2.35	34,798	6,609	19.0	2.25
Lee	43,511	2,287	5.3	2.77	111,013	17,513	15.8	2.46
Collier	17,580	2,450	13.9	2.88	50,743	12,374	24.4	2.49
Region	726,120	24,989	3.4	2.70	1,362,135	133,301	9.8	2.43
State	2,527,596	84,220	3.3	2.90	4,378,691	304,607	7.0	2.55

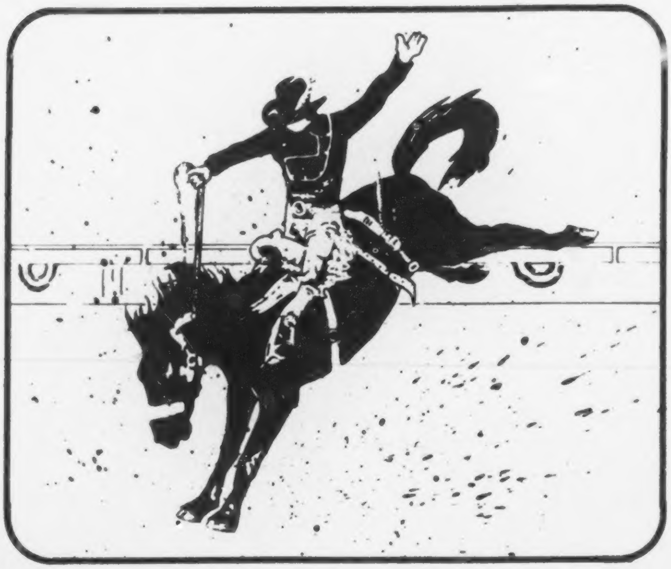
Source : U.S. Bureau of the Census.

the lowest in the region. The annual percentage change in this category reached 12.9 percent between 1970-80, but fell to 1.7 percent between 1980-82, the lowest level for all counties in the region.

An 11-percent increase in the number of farms from 733 in 1969 to a third-ranked level of 815 in 1978, resulted in a 30-percent reduction in the average farm size from 527 to 371 acres during the same period. Total acreage available for farming correspondingly decreased from more than 386,000 in 1969 to more than 302,000 by 1978.

The market value of Hardee County farm products has experienced rapid growth since 1974, and stood at $61.7 million in 1978, up from the $26.7 million in 1974. This 23.3-percent annual growth rate is exceeded by only one other county in the region. From 1969-74, Hardee had experienced a weak 6.4-percent growth in this category, which was far below the region's growth, but has since surpassed the region's 1978 growth rate of only 12.2 percent. The average value of products per farm in 1978 reached $75,700, up from $35,300 in 1974. Both figures were below the regional figures of $106,800 and $88,700 for 1978 and 1974, respectively.

Total reported crimes have been steadily increasing, and reached 855 by 1982. However, there is a slowing of the rate of increase. Between 1972 and 1981, reported crimes grew at a rate of approximately 13 percent, but this has been reduced to a 10.0-percent rate in 1981-82. Crimes per 100,000 inhabitants are on the upswing, with a figure of 4,281.6 in 1982, compared to 3,963.2 in 1981. As with reported crimes, the rate of increase in this category is slowing, moving from a 10.8-percent annual rate from 1972-81 to an 8.0-percent rate by 1982. This figure, however, is still the region's highest.



DE SOTO

DeSoto County is noted for the All Florida Championship Rodeo held annually in Arcadia.

Formerly one of the state's largest counties and named for the Spanish explorer, De Soto County's present boundaries were formed when it was split into four counties in 1921.

De Soto's 1982 population estimate was 20,153, which ranks thirteenth regionally and exceeds only Hardee County's total. The county's annual population increases of 3.8 percent during the seventies slowed to a 2.9-percent rate for 1980-82. The population growth rate for the county has been consistently below the regional growth rates of 4.4 percent for 1970-80, and 3.2 percent from 1980-82.

Age and race characteristics indicate little change in De Soto's population composition. The percentage of the population age 65 and older increased less than one percentage point, moving from 15.6 percent in 1970 to 16.2 percent in 1980. The percentage of white population increased just one point, moving from 79.8 percent in 1970 to 80.8 percent by 1980. De Soto, during the ten-year period of the seventies, still maintained the region's lowest percentage of white population.

Housing units for seasonal and occasional use increased more than six fold, for an annual rate of approximately 20.0 percent from 1970 to 1980. The 131 units available for such use in 1970 accounted for only 3.2 percent of 4,095 total units. By 1980, this number had risen to 799, representing 10.7 percent of the 7,458 total. The average household size of 3.03 in 1970 had been reduced to 2.76 by 1980, exceeded only by the 3.05 level of Hardee County.

Construction industries accounted for 4.4 percent of nonagricultural employment in 1975, and fell to only 1.9 percent by 1981. This decline is highly significant, considering that nonagricultural employment had increased more than 32 percent between 1975-81. Manufacturing, on the other hand, increased its share of the category from 7.7 to 8.4 percent from 1975 to 1981, but this rise was not sufficient to maintain the 12.1-percent contribution of both industries in 1975. The new, combined figure in 1981 stood at 10.3 percent.

De Soto's total personal income of $130.4 million in 1980 was the region's lowest, and is identical to its 1970 position when personal income totaled $35.2 million. Nevertheless, De Soto's 14.0-percent annual growth rate matched the region's personal income growth. Transfer payments in 1980 represented 20.4 percent of total personal income, up from the 16.2 percent it commanded in 1970. Earnings reversed this trend, reducing its contribution to personal income from 71.7 percent in 1970 to 67.2 percent in 1980.

Gross sales of $149.6 million trailed all other counties in the region. Expansion of gross sales from $31.6 million in 1970 to $129.6 million in 1980 resulted in a 15.2-percent annual rate of growth, but growth for 1980-82 slowed to 7.5 percent. Growth rates for both periods were below regional levels. Taxable sales exhibited more vibrant growth trends, improving at annual rates of 16.6 percent for 1970-80. This growth has subsequently declined to a meager 4.5-percent rate for 1980-82, far below the region's total.

Total acreage for farming has steadily increased from 257,011 acres in 1969, to 303,568 by 1978. At the same time, the total number of farms went from 327 with an average size of 786 acres, to 366 with an average size of 829 acres. The county's average farm size almost doubled the regional average of 440 acres.

Consistency best describes trends in the market value of farm products from De Soto County. The annual 15.0-percent rate of increase moved the 1969 total of $10.1 million to $20.2 million by 1974. Following this growth was a 17.3-percent yearly increase from 1974-78, which pushed the market value up to $38.2 million. The 15.0-percent increase during 1969-74 was the region's highest growth rate. The market value of products per farm experienced a healthy 20-percent growth rate between 1974-78 and reached $104,407 per farm by 1978, which is a significant improvement for the county.

Reported crimes in De Soto County held nearly steady between 1981-82, registering 941 and 979, respectively. The realized 4.0-percent increase is encouraging compared to the 15.3-percent annual increase for 1972-81. Crimes per 100,000 people moved up 11.2 percent over 1972-81, but recorded zero change for 1981-82.

Highlands Hammock State Park near Sebring.

HIGHLANDS

Formed as Florida's fifty-sixth county from the 1921 division of De Soto County, Highland's name was chosen as a reflection of its topography.

The county's 1982 population estimate of more than 52,000 was ranked thirty-sixth statewide and implies an annual increase of 4.6 percent over the 1980-82 period. Its population ranks twelfth in the southwest region. Although the 4.9-percent compound rate realized during the seventies outpaced the regional rate of 4.4 percent, it only placed Highlands eighth in terms of growth rate. This lower growth rate was primarily responsible for moving the county from an eleventh rank in population in 1980 to twelfth in 1982, having been surpassed by Hernando County.

There were significant alterations in the county's age and race characteristics between 1970-80. The 65-and-older age group moved from 20.7 percent of the population to 26.3 percent by the end of the decade. At the same time, the percentage of white population increased from 79.1 to 85.5 percent over the same ten-year duration, but is still relatively far below the regional average of 90.2 percent.

Highland's housing characteristics were also dramatically altered between 1970 and 1980. Seasonal and occasional use units numbering 965 in 1970 were only 7.7 percent of the total of 12,547 available units. However, by 1980, these seasonal and occasional use units had jumped almost six fold to 5,325, or 20.5 percent of the 25,994 available. During this period, average household size decreased from 2.78 to 2.43.

Both the manufacturing and construction industries reduced their impact on nonagricultural employment between 1975 and 1981. Construction was responsible for 691 jobs in 1975 and 923 in 1981, but as a percentage of total employment, the figure dropped from 9.0 percent to 8.5 percent, respectively. Manufacturing drastically reduced its contribution from 10.7 percent in 1975 to 6.9 percent by 1981, with total jobs declining from 814 in 1978 to only 750 in 1981. Combined, both industries had accounted for 19.7 percent of all nonagricultural jobs in 1975, but dropped their share to 15.4 percent by year-end 1981.

The 1980 year-end statistics indicated that transfer payments for Highlands County commanded 24.9 percent of total personal income, up from its 17.6-percent level in 1970. Despite the 12.3-percent annual increase in earnings over the decade, by 1980, earnings accounted for only 52.8 percent of the county's $353.8-million total personal income. Its

Table 4.—Southwest Florida: estimates of monthly average employment

	1975					1981				
	Total nonagricultural	Manufacturing		Construction		Total nonagricultural	Manufacturing		Construction	
		Number	Percent of total	Number	Percent of total		Number	Percent of total	Number	Percent of total
Citrus..............	5,438	397	7.3	667	12.3	11,304	507	4.5	1,561	13.8
Hernando............	5,052	478	9.5	310	6.1	9,195	894	9.7	898	9.8
Pasco...............	17,493	2,752	15.7	1,444	8.3	34,038	3,049	9.0	3,502	10.3
Polk................	90,943	17,298	19.0	8,251	9.1	118,126	22,790	19.3	10,020	8.5
Hardee..............	2,472	282	11.4	83	3.4	3,503	406	11.6	114	3.2
DeSoto..............	3,640	279	7.7	161	4.4	4,796	403	8.4	91	1.9
Highlands...........	7,637	814	10.7	691	9.0	10,871	750	6.9	923	8.5
Pinellas............	175,263	23,181	13.2	12,603	7.2	247,133	39,080	15.8	19,373	7.8
Hillsborough........	208,379	29,972	14.4	16,136	7.7	280,624	38,105	13.6	19,778	7.0
Manatee.............	29,004	4,647	16.0	1,950	6.7	44,919	7,646	17.0	4,409	9.8
Sarasota............	46,349	3,702	8.0	4,671	10.1	72,564	6,447	8.9	7,664	10.6
Charlotte...........	8,441	173	2.1	681	8.1	14,367	369	2.6	2,068	14.4
Lee.................	38,532	2,583	6.7	4,406	11.4	70,495	4,108	5.8	9,262	13.1
Collier.............	15,543	586	3.8	1,984	12.8	30,944	1,240	4.0	5,012	16.2
Region..............	654,188	87,144	13.3	54,037	8.3	952,877	125,795	13.2	84,674	8.9
State...............	2,564,916	336,648	13.1	172,179	6.7	3,590,184	476,193	13.3	272,851	7.6

Source : Florida Department of Labor and Employment Security.

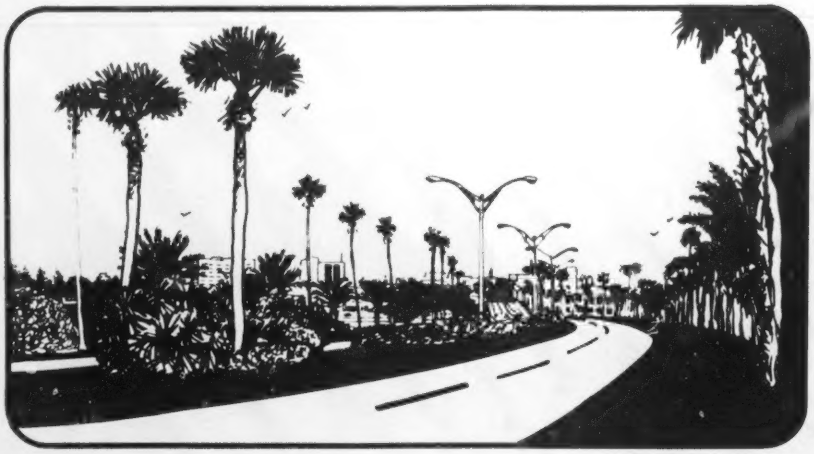
per capita income of $7,427 in 1980 trails the region's $8,840 level; however, both have similar 1970-80 growth rates of 9.1 and 9.2 percent, respectively.

With a yearly increase of 16.6 percent, gross sales for Highlands County moved from $73.8 million in 1970, to $342.0 million by 1980. The 7.7-percent growth rate for 1980-82 was less impressive, but managed to push gross saies up to $396.7 million by 1982. Regional sales figures increased at an annual rate of 15.7 percent during the seventies and 9.6 percent from 1980-82, and are now outpacing Highlands. The county's taxable sales exhibited the same trend when compared to regional figures, with an annual increase for 1970-1980 of 15.2 and 13.2 percent, respectively. However, for the 1980-82 period, Highlands' taxable sales increased by 7.0 percent, compared to 7.4 percent for the region.

Average farm size in the county, which was 1,441 acres in 1969, declined 39.9 percent to 866 acres by 1978. During the same years, the total number of farms rose from 358 to 466, a 30.2-percent increase. Land available for farming was consistent with regional trends, dropping from 515,781 to 403,553 acres from 1969 through 1978.

The market value of products from Highlands County improved tremendously between 1969 and 1978, posting a 7.0-percent annual increase from 1969-74, and pushing the market value from $25.6 million to $35.9 million. The increase then continued at a whopping 20.2-percent annual rate from 1974-78, pushing the value of farm products up to a respectable $74.9 million. Special mention must be given to the average market value of products per farm, which reached $160,802, a figure surpassed by only one other county, and far above the regional average of $106,780.

Crime in Highlands County is on the decline. After annual increases of 17.5 percent from 1972 to 1981, reported crime has since subsided, registering a negative 10.1-percent rate between 1981-82. Crimes per 100,000 people followed an identical pattern, increasing annually by 13.3 percent between 1972-81, and falling by 14.1 percent from 1981-82.



The Memorial Causeway connects Clearwater with its popular beach.

PINELLAS

Originally known to early Spanish explorers as Punta Pinal, or "point of pines," Pinellas County was carved from Hillsborough County territory in 1911 and was Florida's forty-eighth county.

As the region's most populous county, Pinellas population was estimated to be nearly 756,000 by 1982, a 1.9-percent annual change over the 1980 figure of 728,531. However, the county's growth rate has been substantially below the regional rate over the past two decades, and has resulted in a decline of its share of the region population from a high of 29.0 percent of the total in 1970 to its current share of 25.6 percent.

The county's percentage of white population has remained virtually unchanged, with a 0.2-percent increase from 1970-80, to a level of 91.8 percent. This figure exceeds the regional average of 90.2 percent. Those age 65 and older were reduced from 29.4 percent of the total population in 1970 to 27.8 percent by 1980, which is considerably higher than the regional and state levels of 22.0 and 17.3 percent, respectively.

Pinellas County, although ranking second regionally in total housing units available, has managed to keep seasonal and occasional-use units at a minimum. Of the nearly 170,000 units available in 1970, only 0.6 percent were for seasonal or occasional use. A 4.6-percent annual growth rate increased total units to more than 263,000 by 1980, and only 5,834 units, or 2.2 percent of the total, were for seasonal or occasional use. The county's percentage in this category was far below the regional average of 9.8 percent, and was the lowest among the fourteen counties. Average household size dropped by 11.9 percent, moving from 3.02 in 1970 to 2.66 by 1980. Both averages were above regional and state levels.

The manufacturing and construction industries increased their share of nonagricultural employment between 1975 and 1981. The most impressive gains occurred in the manufacturing area, which improved on the 23,181 jobs it provided in 1975 by accounting for 39,080 jobs in 1981. These figures represented 13.2 and 15.8 percent of the total jobs available in 1975 and 1981, respectively. Construction industries also improved their contribution to nonagricultural employment from 7.2 percent of the total in 1975 to 7.8 percent in 1981. Total nonagricultural employment provided more than 247,000 jobs in 1981, a 5.9-percent annual increase over the 175,263 jobs available in 1975.

Pinellas' total personal income ranks first in the region, accounting for 28.7 percent of the area's total in 1980. The $7.0 billion recorded by the county in 1980 is an increase of 13.1 percent at an annual rate from the $2.1 billion figure of 1970. Transfer payments increased its share of the income pie to 23.3 percent in 1980, up from 19.7 percent in 1970. Conversely, earnings were reduced from 53.0 percent of personal income in 1975 to 51.4 percent by 1980. Per capita income of $9,643 in 1980 was ranked third among counties in the southwest, and was superior to the regional and statewide levels.

Ranking second regionally in 1982 in both gross and taxable sales with amounts of $8.9 billion and $4.4 billion, respectively, Pinellas achieved respectable growth rates in both areas. The 14.2-percent growth rate between 1970-80 for gross sales was actually below the 15.7-percent regional average, but was above the state's 14.0-percent rate. More re-

Table 5.—Southwest Florida: personal income

	1970						1980					
			Transfers		Earnings				Transfers		Earnings	
	Total ($000s)	Per capita	Amount ($000s)	Percent of total	Amount ($000s)	Percent of total	Total ($000s)	Per capita	Amount ($000s)	Percent of total	Amount ($000s)	Percent of total
Citrus.........	51,203	2,586	13,079	25.5	23,313	45.5	338,432	6,172	107,296	31.7	143,285	42.3
Hernando.......	49,310	2,814	9,257	18.8	33,141	67.2	290,508	6,518	81,043	27.9	124,160	42.7
Pasco..........	209,659	2,683	47,458	22.6	86,936	41.5	1,240,553	6,376	387,801	31.3	468,312	37.8
Polk...........	758,809	3,294	94,272	12.4	602,472	79.4	2,639,486	8,186	415,927	15.8	2,047,400	77.6
Hardee.........	41,977	2,801	4,814	11.5	29,919	71.3	140,501	7,233	20,420	14.5	96,796	68.9
DeSoto.........	35,182	2,657	5,685	16.2	25,227	71.7	130,359	6,831	26,5[illegible]	20.4	87,624	67.2
Highlands......	92,951	3,109	16,369	17.6	58,467	62.9	353,778	7,427	88,225	24.9	186,798	52.8
Pinellas.......	2,058,260	3,897	406,484	19.7	1,091,148	53.0	7,040,987	9,643	1,642,270	23.3	3,616,628	51.4
Hillsborough...	1,707,744	3,461	185,789	10.9	1,431,679	83.8	5,468,343	8,412	796,370	14.6	4,482,437	82.0
Manatee........	333,685	3,419	61,898	18.5	177,679	53.2	1,329,080	8,933	294,993	22.2	668,728	50.3
Sarasota.......	575,201	4,702	91,355	15.9	295,892	51.4	2,288,936	11,287	468,004	20.4	1,056,240	46.1
Charlotte......	92,412	3,303	24,030	26.0	40,621	44.0	500,780	8,452	142,033	28.4	192,634	38.5
Lee............	392,031	3,649	62,609	16.0	235,136	60.0	1,869,304	9,086	383,604	20.5	1,005,610	53.8
Collier........	188,399	4,846	18,251	9.7	116,653	61.9	910,859	10,569	125,463	13.8	486,723	53.4
Region.........	6,586,823	3,661	1,041,350	15.8	4,248,283	64.5	24,541,840	8,840	4,979,996	20.3	14,663,380	59.7
State..........	25,866,660	3,779	3,132,064	12.1	18,671,280	72.2	88,693,360	8,993	15,298,630	17.2	58,233,660	65.7

Source : U.S. Department of Commerce, Bureau of Economic Analysis, unpublished data.

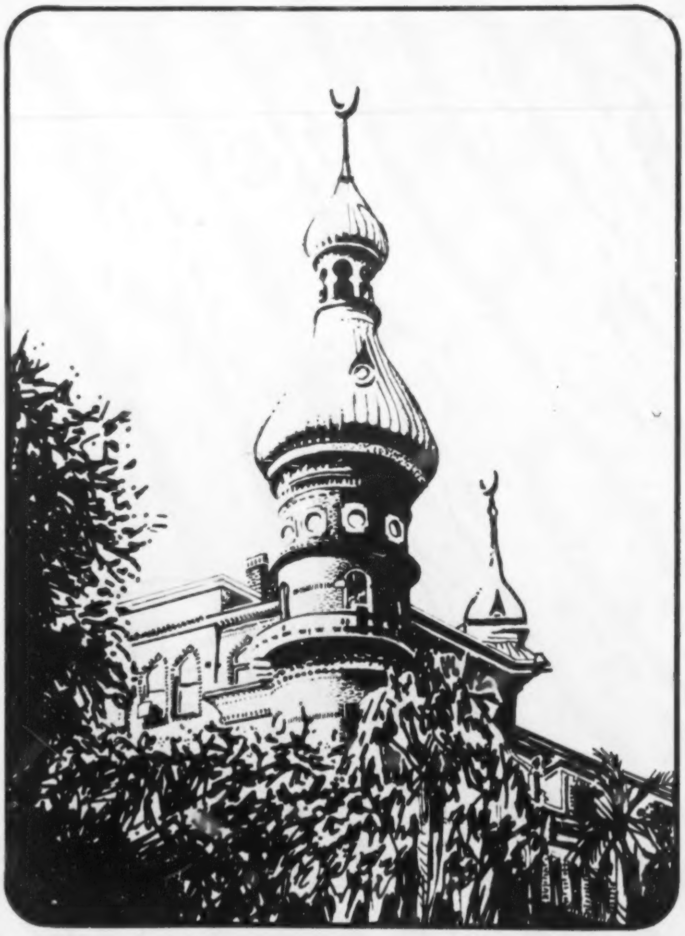
cent trends for 1980-82 showed just the reverse, with Pinellas' 10.8-percent annual growth rate being greater than the regional and statewide rates of 9.6 and 8.9 percent, respectively. The trend for taxable sales was identical.

By 1978, only 16,112 acres of farm land remained in Pinellas, a decrease of nearly 2,000 acres from the 1969 level. The total number of farms dropped from 164 in 1969 to 155 in 1978, a movement that runs counter to the regional trend of more farms, but with smaller average sizes. Pinellas has the region's smallest allocation of land for farms.

The market value of farm products remained fairly stable during 1969-74, increasing at an annual rate of only 0.3 percent. In 1978, the total value of products was $7.8 million, which exceeded only Citrus County's $5.2-million level. The average market value of products per farm moved from $38,230 in 1969, to $50,362 by 1978, a 3.1-percent annual rate.

The county's 47,507 reported crimes in 1982 ranked second regionally, after experiencing a fairly low 11.1-percent rate of increase in crimes between 1972-81. The 1982 total is actually more than 2,500 less than the 50,103 reported in 1981. Crimes per 100,000 people also fell from 6,740.6 to 6,284.5 between 1981-82, a negative 6.8-percent change.

HILLSBOROUGH



The minarets of the old Plant Hotel now are a central focus of the University of Tampa campus.

Wills Hill, the Viscount Hillsborough, was the recipient of a large grant of Florida land during British rule over the state. Named in honor of the original landholder, Hillsborough County was formed in 1834.

Hillsborough's population is second-highest regionally, with an estimated 677,733 inhabitants in 1982. Population growth has been extremely steady over the past 22 years, recording a 2.1-percent annual rate from 1960-70, a 2.8-percent rate from 1970-80, and a 2.4-percent increase from 1980-82. These rates have been consistently below the regional and statewide rates over the same periods. The relatively faster growth of all but two other counties has reduced the regional impact of Hillsborough's population. After accounting for 27.3 percent of the region's 1.8-million population count in 1970, Hillsborough's share has been reduced by 1982 estimates to 22.9 percent of the area's 2.96 million inhabitants.

Hillsborough was the only county to experience a reduction in its percentage of white population. The reduction was marginal, dropping 0.3 percent from 86.1 percent in 1970 to 85.8 percent in 1980, but was still a trend unique to the county. The 11.5-percent share of its population attributed to those age 65 and older in 1980 was another marginal change between 1970-80. The 1970 level of 10.4 percent reflects a 1.1-percent change in this population component over the ten-year period.

Ranked first regionally in total housing units, the 377,052 available units in 1980 accounted for 27.7 percent of the area's 1.36-million total. Actually, this percentage represents a reduction from the county's 31.5-percent share in 1970. The comparatively slow 2.7-percent annual increase was primarily responsible for slowing this dominance, because the region grew at a 6.5-percent yearly rate over this ten-year period.

The manufacturing sector accounted for 38,105 jobs, or 13.6 percent of total nonagricultural employment in 1981. This figure represents a 27.1-percent improvement over the 29,972 jobs it provided in 1975, which was 14.4 percent of the total. Construction industries followed a similar pattern, increasing the number of jobs by 3,642 over the period, but slipping as a percentage of the total from 7.7 percent in 1975 to 7.0 percent in 1981. More than 72,000 new jobs were established over the same period, representing a 5.1-percent annual growth rate for the total nonagricultural employment category.

Of the $5.5 billion in personal income generated in 1980, $4.5 billion, or approximately 82 percent, was from earnings, allowing Hillsborough to remain the regional leader in total earnings and earnings as a percentage

Table 6.—Southwest Florida: gross and taxable sales (in $000s)

	Gross sales					Taxable sales				
				Annual percent change					Annual percent change	
	1970	1980	1982	1970-80	1980-82	1970	1980	1982	1970-80	1980-82
Citrus	50,766	311,143	430,973	19.9	17.7	37,922	179,539	223,168	16.8	11.5
Hernando	48,400	348,637	456,191	21.8	14.4	22,085	157,911	186,574	21.7	8.7
Pasco	195,841	1,104,667	1,367,612	18.9	11.3	154,846	654,528	767,508	15.5	8.3
Polk	939,456	4,770,588	5,338,540	17.6	5.8	470,058	1,771,507	1,965,008	14.2	5.3
Hardee	27,971	141,617	161,389	17.6	6.8	18,182	61,027	63,120	12.9	1.7
DeSoto	31,586	129,585	149,618	15.2	7.5	13,093	60,943	66,568	16.6	4.5
Highlands	73,776	342,010	396,661	16.6	7.7	46,803	193,493	221,463	15.2	7.0
Pinellas	1,920,571	7,228,037	8,874,984	14.2	10.8	1,212,705	3,723,006	4,354,402	11.9	8.1
Hillsborough	2,745,206	10,622,770	12,498,310	14.5	8.5	1,413,395	4,061,754	4,694,949	11.1	7.5
Manatee	338,155	1,539,531	1,847,266	16.4	9.5	184,775	770,155	893,987	15.3	7.7
Sarasota	487,321	2,154,611	2,669,659	16.0	11.3	349,561	1,330,835	1,543,173	14.3	7.7
Charlotte	56,927	422,228	489,723	22.2	7.7	42,314	280,549	311,486	20.8	5.4
Lee	497,525	2,403,893	2,932,820	17.1	10.5	361,914	1,433,540	1,620,961	14.8	6.3
Collier	149,959	978,083	1,392,390	20.6	19.3	108,079	660,728	773,493	19.8	8.2
Region	7,563,453	32,497,340	39,006,060	15.7	9.6	4,435,727	15,339,510	17,685,870	13.2	7.4
State	36,618,[illegible]0	136,207,200	161,671,300	14.0	8.9	18,332,320	58,153,810	66,626,960	12.2	7.0

Source : State of Florida, Department of Revenue, Sales Tax Totals by Kind, 1970, 1980, 1982.

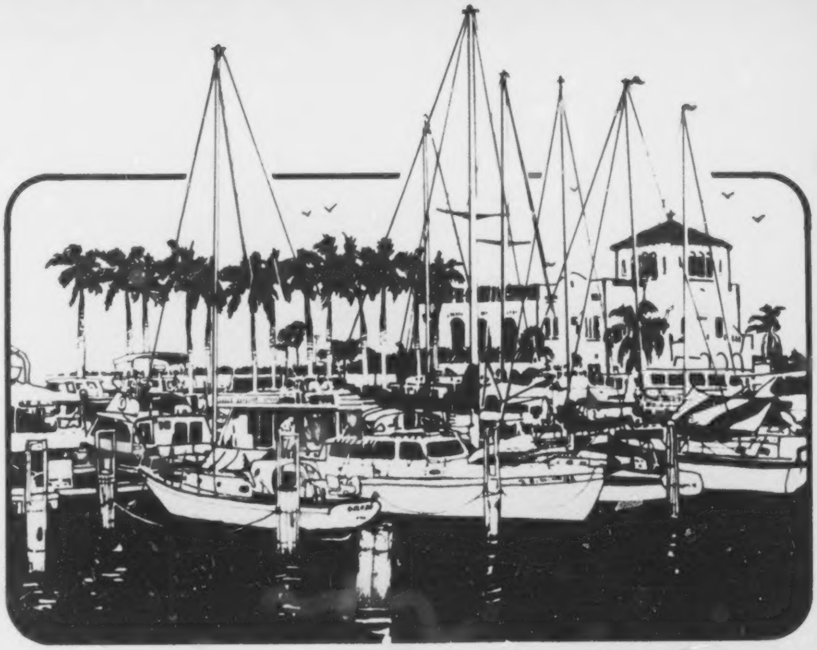
of total income. The 82 percent was a decline from the 1970 level of 83.8 percent. Transfer payments as a share of total income increased from 10.9 percent in 1970 to 14.6 percent in 1980.

With gross sales of $12.5 billion and taxable sales of $4.7 billion, Hillsborough retained its number one regional rank in both categories. The growth of these categories, however, has been less than regionwide levels during the seventies. The county's gross and taxable sales figures represent 32.0 and 26.5 percent of the regional totals, respectively.

Hillsborough in 1978 had 1,752 producing farms, second only to Polk County. With an average size of 165 acres, the county's farms are very small when compared to the rest of the region, which averages almost 440 acres per farm. This trend is not surprising, since there were less than 290,000 acres available in 1978, which is much less than the 327,525 acres available in 1969 when 1,384 farms were operating.

Despite the relatively small farms in the county, the market value of farm products totaled $171.4 billion in 1978, second only once again to Polk. The value of these crops has been increasing steadily by 13.3 percent over the 1969-74 period, and by 12.3 percent over the 1974-78 period. These figures exceed the region's total during both periods. The average market value of products per farm reached $97,812 by 1978, an annual change of 9.9 percent from the $41,627 figure of 1969.

Based upon either its 64,450 reported crimes or on a crimes-per-100,000-people basis, Hillsborough topped the region in this statistic in 1982. Total reported crimes represented 39 percent of the regional total, and the 9,509.6 crimes per 100,000 inhabitants vastly exceed any other county, with the next closest being 6,733.1. However, these 1982 reports indicate an improvement over the 1981 figures, which follows the statewide trend.



MANATEE

Bradenton's municipal pier and yacht basin.

Originally created in 1855, Manatee County's present boundaries were formed in 1921 when its southern half was used to form Sarasota County. Manatee was named for the endangered sea cows now found only in isolated pockets in Florida.

The county ranked seventh regionally in population with a 1982 estimate of 158,974 inhabitants. It experienced a 4.3-percent yearly growth rate during the 1970s, and an annual rate of 3.5 percent from 1980 to 1982.

Age and race characteristics indicate that the group age 65 and older comprised 30.1 percent of the county's population in 1970 and 27.1 percent in 1980. Its percentage of white population experienced a similar change, but in the opposite direction, moving from 88.0 percent of the total in 1970 to 90.6 percent in 1980, which followed the regional trend.

The percentage of housing units allotted for seasonal and occasional use more than tripled from 4.1 percent of the total in 1970 to 13.3 percent in 1980. Units available in 1980 totaled 83,588, placing Manatee seventh regionally. Housing units grew by a compound rate of 6.9 percent from 1970 to 1980, outpacing the region's 6.5-percent rate and the state's 5.6-percent increase.

Nonagricultural employment enjoyed an annual growth of 7.6 percent from 1975 through 1981, moving from 29,004 to 44,919 jobs, respectively. Combined manufacturing and construction industries accounted for 22.7 percent of total employment in 1975 and improved to 26.8 percent of the total in 1981, with both categories showing increases in the number of jobs provided and the percentage of the total accounted for.

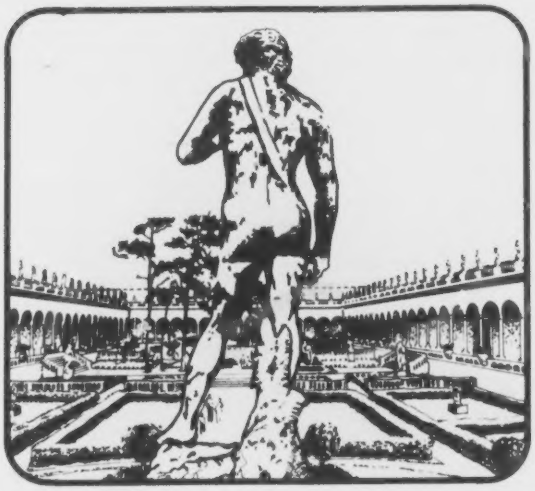
The county's 1980 personal income of $1.3 billion ranked sixth regionally. Transfer payments of $295 million contributed 22.2 percent of the total, up from its 18.5-percent share in 1970. Earnings in 1980 amounted to $668.7 million, or 50.3 percent of the total, dropping below the 53.2-percent level it posted in 1970. A similar regional and statewide trend also prevailed, with lower percentage levels for earnings in 1980 than in 1970.

Gross sales netted $1.8 billion, allowing the county to remain sixth regionally in this category. Growth was just above average, registering 16.4 percent annually for the 1970-80 period and subsequently falling to a 9.5-percent rate for 1980-82, just below the region's 9.6-percent. Taxable sales of $894.0 million in 1982 showed decent increases of 15.3 and 7.7 percent for the 1970-80 and 1980-82 periods, respectively.

Manatee was one of just four counties to increase farming acreage from 1969 to 1978, making an additional 31,812 acres available during the period. Smaller farms were the dominant trend, dropping from an average of 735 acres in 1969 to 690 acres by 1978. Operating farms increased in number by 17.5 percent from 416 in 1969 to 489 in 1978.

A healthy 12.5-percent annual increase in the market value of Manatee County farm products characterized the 1969-74 period, easily outperforming the region's 9.8-percent rate or the state's 11.0-percent increase. However, the county's 11.4-percent growth rate from 1974-78 fell below the 12.2- and 12.6-percent rates, respectively, for the region and the state. The average market value of products per farm reached $137,564 by 1978, fifth highest in the region and a 6.5-percent rate of increase above the 4.8-percent rate for the southwest counties from 1974-78.

Total crimes increased to 10,024 in 1982, marginally higher than the 9,966 reported in 1981. From 1972 through 1981, crimes had increased at an annual rate of 15 percent. Crimes per 100,000 people also dropped in 1982 to 6,198.5, down from 6,353.0 from the previous year. Despite the 2.4-percent decrease, the county's rate did not match the region's 7.8-percent decline.



SARASOTA

The Ringling Museum in Sarasota.

Florida's sixtieth county was formed from a portion of Manatee County in 1921. Although the exact meaning of Sarasota is not known, its name is believed to come from an Indian legend referring to a portion of its Gulf of Mexico shoreline known as "The Point of Rocks."

Sarasota's estimated population in 1982 was 215,443, a 3.2-percent annual rate of change from the 202,251 recorded in 1980. The seventies had seen a relatively vibrant growth rate of 5.3 percent, which was above the regional or statewide levels. Estimates indicate identical increases for the county, region and state up to 1982.

Similar rates of growth between 1970 and 1980 were experienced for the 65-and-older age group, and for the percentage of white population. The first group increased its share of the total population to 30.0 percent in 1980, up from 28.6 percent in 1970, and a 1.4-percentage-point increase. The second component also increased its share by 1.3 percentage points from 93.0 to 94.3 percent for 1970-80.

The percentage of housing units set aside for seasonal and occasional use almost doubled during the seventies in Sarasota. In 1970, 3,691 units were allotted for such use, or 6.6 percent of the total of 56,242. However, by 1980, 14,560 of these units commanded 12.8 percent of the total of 113,355. Total housing in Sarasota during this period had increased annually at a 7.3-percent rate, while the region's total had risen at a 6.5-percent yearly rate for the same time span. As in other counties, average household size decreased from 2.44 to 2.25 from 1970-80.

Total nonagricultural employment stood at 72,564 jobs in 1981, a 56.6-percent gain over the 1975 level. The combined manufacturing and construction sectors provided 14,111 jobs in 1981, or 19.5 percent of the total, which was an increase over the 8,373 jobs available in 1975 that represented 18.1 percent of the total then. Both categories showed improvement, particularly manufacturing, which increased its share of total employment from 8.0 percent in 1975 to 8.9 percent in 1981.

Sarasota ranked fourth in total personal income in 1980, with $2.3 billion, up at a 14.8-percent annual rate from $575.2 million in 1970. Transfer payments in 1980 totaled $468.0 million, or 20.4 percent of personal income, after accounting for 15.9 percent of the total in 1970. As with many counties in the southwest, earnings as a percentage of personal income fell between 1970 and 1980, moving from 51.4 to 46.1 percent, respectively. The $1.1 billion recorded as earnings in 1980 was also the fourth highest regionally. Per capita income of $11,287 in 1980 was the highest of any county, and easily exceeded the regional and statewide figures.

Consistently outpacing regional growth in both gross and taxable sales, Sarasota posted a sum for these categories of $2.7 billion and $1.5 billion, respectively, in 1982. After increasing by 16.0 percent yearly from 1970-80, gross sales slowed to an annual rate of 11.3 percent for 1980-82. Taxable sales did almost as well, increasing by 14.3 percent annually from 1970-80, and 7.7 percent from 1980-82.

The number of farms increased from 97 in 1969 to 157 in 1978, a good boost for farming and a 61.9-percent increase over the 1969 figure. The average farm size, however, remained virtually unchanged from 1,484 acres in 1969 to 1,479 acres in 1980, or less than a 1-percent reduction. Correspondingly, total available farming acreage increased by 61.3 percent from 1969 to 1978, and accounted for 232,187 acres. Sarasota's increase in farm land was the region's largest, in either percentage or absolute terms.

The county's farm products had a market value of $10.9 million in 1978, a healthy 18.0-percent annual growth from the $5.6

Table 7.—Southwest Florida: agricultural statistics—Part A*

	1969			1974			1978		
	Total number of farms	Total number of acres	Average farm size	Total number of farms	Total number of acres	Average farm size	Total number of farms	Total number of acres	Average farm size
Citrus	101	98,401	974	99	94,507	955	154	92,380	600
Hernando	202	67,189	333	180	61,738	343	245	67,710	276
Pasco	645	313,543	486	621	298,811	481	783	294,967	377
Polk	1,748	799,333	457	1,714	747,736	436	1,800	657,364	365
Hardee	733	386,143	527	756	297,475	393	815	302,356	371
DeSoto	327	257,011	786	407	268,368	659	366	303,568	829
Highlands	358	515,781	1,441	410	429,738	1,048	466	403,553	866
Pinellas	164	17,997	110	129	13,657	106	155	16,112	104
Hillsborough	1,384	327,525	237	1,324	326,094	246	1,752	289,878	165
Manatee	416	305,692	735	407	357,495	878	489	337,504	690
Sarasota	97	143,926	1,484	119	216,782	1,822	157	232,187	1,479
Charlotte	80	212,668	2,658	101	163,098	1,615	127	164,999	1,299
Lee	160	125,088	782	152	116,416	766	243	101,156	416
Collier	86	301,390	3,505	114	256,095	2,246	171	283,975	1,661
Region	3,335	1,913,419	574	3,246	1,904,693	587	4,276	1,880,868	440
State	20,096	12,718,340	633	20,927	12,256,910	586	28,076	12,416,890	442

Table 8.—Southwest Florida: agricultural statistics—Part B*

	Market value ($000s)					Average market value of products per farm		
				Annual rate of change				
	1969	1974	1978	1969-74	1974-78	1969	1974	1978
Citrus	1,767	2,849	5,207	10.0	16.3	17,494	28,778	33,814
Hernando	12,205	24,426	24,135	14.9	0.3	60,442	135,700	98,509
Pasco	34,221	47,464	72,887	6.8	11.3	53,055	76,432	93,087
Polk	94,334	136,629	271,647	7.7	18.7	53,968	79,714	150,915
Hardee	19,565	26,673	61,664	6.4	23.3	26,692	35,282	75,662
DeSoto	10,053	20,203	38,213	15.0	17.3	30,742	49,639	104,407
Highlands	25,626	35,902	74,934	7.0	20.2	71,580	87,566	160,802
Pinellas	6,270	6,183	7,806	0.3	6.0	38,230	47,930	50,362
Hillsborough	57,612	107,563	171,367	13.3	12.3	41,627	81,241	97,812
Manatee	24,315	43,750	67,269	12.5	11.4	58,448	107,494	137,564
Sarasota	6,087	5,641	10,924	1.5	18.0	62,753	47,403	69,579
Charlotte	3,342	4,832	12,978	7.7	28.0	41,775	47,482	102,187
Lee	16,688	18,954	38,727	2.6	19.6	104,300	124,697	159,369
Collier	17,706	26,132	45,293	8.1	14.7	205,877	229,228	264,869
Region	180,213	287,794	456,593	9.8	12.2	54,037	88,661	106,780
State	1,116,892	1,881,923	3,025,611	11.0	12.6	55,578	89,928	107,765

*All data for farms with sales greater than $2,500.
Source : U.S. Department of Commerce, 1974 and 1978 Census of Agriculture.

million posted in 1974. From 1969 to 1974, the county could only average a 1.5-percent growth rate annually. The average market value of products per farm in 1978 stood at $69,579, a solid 10.1-percent yearly increase from the $47,403 level in 1974.

Reported crimes dipped from 13,037 in 1981 to 12,644 in 1982. This very prevalent trend also carried over to the category of crimes per 100,000 residents, which experienced a 5.7-percent decline from 6,302.3 in 1981 to 5,944.5 in 1982.

CHARLOTTE

Early Spanish explorers Ponce de Leon and de Narvaez explored the waters of Charlotte Harbor.

Formed as another part of the De Soto County division in 1921, Florida's fifty-seventh county is named for the giant harbor area where early explorers Juan Ponce de Leon and Panfilio de Narvaez dropped anchor in 1513 and 1528, respectively.

The county has a 1982 estimated population of 66,430. Growing much faster than the regional average, Charlotte County gained residents at a 7.8-percent rate annually during the seventies, and kept a fairly high 6.6-percent growth rate for 1980-82. A 7.6-percent annual growth rate over the entire 12-year period has increased the total population from 27,559 in 1970 to the current estimate in 1982.

With its percentage of white population standing at 97.4 in 1980, Charlotte was .01 percent away from topping all counties in the region on this population component. Its 97.1-percent level in 1970 had put the county in first place, but Pasco grew past Charlotte going into 1980. However, with 33.9 percent of its population age 65 and older in 1980, the county remained first regionally in this aspect, after also leading the region in 1970 with 35.0 percent of its population in the same category.

Of the 13,572 housing units available in 1970, 7.9 percent were for seasonal and occasional use. By 1980, total housing had jumped to 34,798 units, at an annual rate of 9.9 percent, but seasonal and occasional-use housing had increased to 6,609 units, or a whopping 19.0 percent of the 1980 total. Average household size changed marginally, moving from 2.35 in 1970 to 2.25 by year-end 1980.

Employment provided by the manufacturing and construction industries totaled only 854 jobs, or 10.2 percent of the total figure in 1975. However, by 1980, this share had risen to 17.0 percent of the 14,367 total jobs. Construction now provides 2,068 jobs, or 14.4 percent of the 1981 total, after accounting for only 8.1 percent of the 1975 total. The manufacturing sector showed only marginal improvement, pushing its share of total employment from 2.1 to 2.6 percent for 1975 and 1981, respectively.

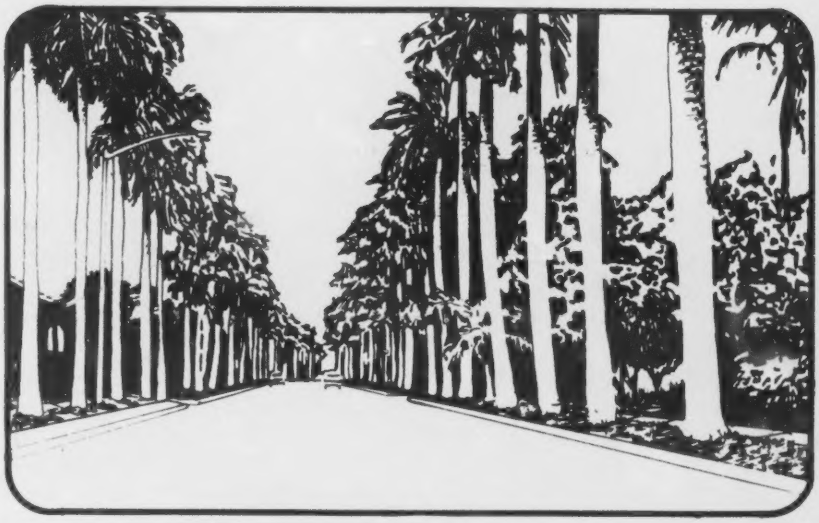
Personal income in Charlotte County experienced a healthy 18.4-percent annual growth rate between 1970 and 1980, advancing from $92.4 million to $500.8 million. Of the 1980 figure, 28.4 percent, or $142.0 million, was comprised of transfer payments, up from its 26.0-percent share in 1970. Earnings followed the opposite path, with its share of total income dropping from 44.0 percent in 1970 to 38.5 percent by 1980. The county's per capita income of $8,452 was just below the region's $8,840.

During the seventies, Charlotte had the region's highest growth rate for gross sales, with a 22.2-percent rate propelling sales of $56.9 million in 1970 to a $422.2-million level by 1980. Since then, growth has slowed to a lowly 7.7-percent rate annually for the 1980-82 period, leaving gross sales at $489.7 million for 1982. Taxable sales performed very closely to gross sales, enjoying an annual growth of 20.8 percent for the seventies, which was second only to Hernando County's 21.7-percent rate. Taxable sales jumped from $42.3 million in 1970 to $280.5 million by 1980, but a slower growth rate of 5.4 percent for 1980-82 put taxable sales at $311.5 million by 1982.

From 1969 through 1978, the average farm size in Charlotte declined dramatically from 2,658 acres to 1,299 acres per farm. However, the number of farms increased from 80 in 1969 to 127 by 1978. As expected, the total acreage available for farming fell 22.4 percent over the period, from 212,668 acres in 1969 to 164,999 acres by 1978.

The market value of the county's farm products grew 7.7 percent annually for the 1969-74 period, and placed the county thirteenth regionally in the category in 1974. By 1978, however, a 28.0-percent rate of change launched the county into eleventh place, with a market value of $13.0 million. Average market value experienced the same dramatic growth, increasing annually by only 2.6 percent from 1969 through 1974, then jumping to a yearly growth of 21.1 percent for 1974-78. Charlotte's average market value of $102,187 in 1978 changed its regional ranking from eleventh in 1974 to seventh.

On an absolute basis, reported crime in Charlotte has been relatively low compared to the rest of the region. In fact, crime per 100,000 people indicates that the county's 2,566.6 level in 1982 is the region's lowest. Nevertheless, the trend is for increasing crime statistics, with reported crime rising by 10.6 percent annually between 1972 and 1981, but shooting up to a 14.7-percent growth for 1982 over 1981. Even the 2,566.6 crimes per 100,000 people increased over the 1981 level of 2,415.3, making Charlotte one of only three counties with an increase in this category.



L E E

The famous avenue of palms on McGregor Boulevard in Fort Myers.

Named for General Robert E. Lee, Florida's forty-first county was the state's largest until it was carved up by the Legislature in 1923.

Lee County contained an estimated 227,259 residents in 1982. Its contribution to the region's population has steadily increased from 5.8 percent, to 7.4 percent and 7.7 percent for 1970, 1980 and 1982, respectively. Recent growth for 1980-82 indicates a 5.2-percent annual growth for Lee's population.

Age and race characteristics indicate that in 1970, 18.7 percent of the county's population was 65 years or older, and has since increased to 22.3 percent by 1980. The percentage of white population has moved in a similar direction, increasing from 88.3 percent of the total in 1970 to 91.6 percent by 1980.

Of the 43,511 housing units available in 1970, only 2,287, or 5.3 percent, were set aside for seasonal and occasional use. By the end of 1980, there were 111,013 units, and those for seasonal and occasional use had increased to 17,513, or 15.8 percent of the total. Average household size dropped from 2.77 in 1970 to 2.46 by 1980.

Despite a growth of 1,525 jobs, the contribution of manufacturing industries to total nonagricultural employment fell from 6.7 percent in 1975, to 5.8 percent in 1981. Construction, on the other hand, provided 4,856 new jobs and increased its share of this category to 13.1 percent in 1981, up from 11.4 percent in 1975. Primarily due to the construction sector, the two industries combined managed to increase their share of total nonagricultural employment from 18.1 to 18.9 percent for 1975 and 1981, respectively.

Table 9.—Southwest Florida: comparative crime statistics

	Total crimes			Crimes per 100,000 people				
							Annual percent change	
	1972	1981	1982	1972	1981	1982	1972-81	1981-82
Citrus..............	605	2,653	2,571	2,374.8	4,478.4	4,126.3	7.2	-7.9
Hernando............	533	2,173	2,504	2,482.8	4,455.5	4,726.9	6.6	6.1
Pasco...............	1,851	8,454	8,722	1,910.6	4,132.0	4,117.0	8.9	-0.4
Polk................	8,774	23,929	22,816	3,523.2	7,233.0	6,733.1	8.2	-6.9
Hardee..............	251	778	855	1,559.0	3,963.2	4,281.6	10.8	8.0
DeSoto..............	262	941	979	1,848.6	4,857.3	4,857.8	11.2	0.0
Highlands...........	550	2,356	2,117	1,517.5	4,734.8	4,068.3	13.3	-14.1
Pinellas............	19,460	50,103	47,507	3,292.2	6,740.6	6,284.5	8.2	-6.8
Hillsborough........	22,866	68,884	64,450	4,302.5	10,417.4	9,509.6	10.2	-8.7
Manatee.............	2,821	9,966	10,024	2,576.1	6,353.0	6,198.5	10.4	-2.4
Sarasota............	4,862	13,037	12,644	3,710.6	6,302.3	5,944.5	6.0	-5.7
Charlotte...........	601	1,487	1,705	1,764.4	2,415.3	2,566.6	3.5	6.3
Lee.................	4,012	10,924	9,169	3,241.7	5,084.1	4,034.6	5.1	-20.6
Collier.............	1,891	6,008	5,808	4,252.5	6,595.7	5,920.9	4.9	-10.2
Region..............	59,502	173,689	165,104	2,840.1	6,055.6	5,581.6	8.7	-7.8
State...............	284,566	816,439	777,517	3,824.0	8,805.4	7,493.9	9.6	-14.9

Source : State of Florida, Department of Law Enforcement, Crime in Florida, Annual Report, 1972, 1981, and 1982.

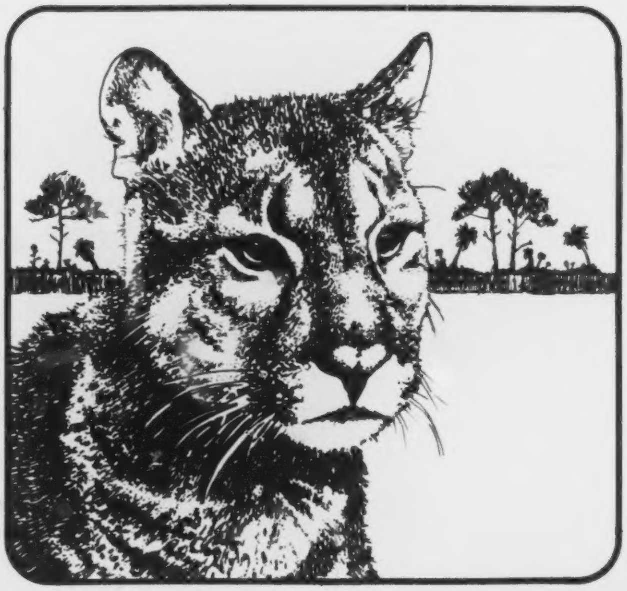
Ranking fifth regionally with $1.9 billion in personal income, Lee County enjoyed 16.9-percent annual growth in this category during the seventies. Earnings that accounted for 60.0 percent of personal income in 1970 followed the existing trend and lowered its contribution to only 53.8 percent by 1980. Transfer payments increased its share of the total from 16.0 percent in 1970 to 20.5 percent by 1980. Per capita income of $9,086 in 1980 represented a 9.6-percent yearly increase from the $3,649 level of 1970.

The $2.9 billion generated in 1982 from gross sales pushed Lee County into fourth position regionally. From 1970 to 1980, gross sales increased annually by a strong 17.1 percent, ending the decade at $2.4 billion. The growth rate subsequently fell to a 10.5-percent level for 1980-82, ending the period at $2.9 billion. Taxable sales in 1982 were the region's fourth highest, totaling $1.6 billion, which represented a 6.3-percent annual growth rate from the 1980 total of $1.4 billion. During the 1970s, taxable sales grew 14.8 percent annually.

Total farming acreage moved downward by 19.1 percent from 125,088 acres in 1969 to 101,156 acres by 1978. Conversely, producing farms increased in number from 160 to 243 by 1978. As expected, the average farm size fell, declining by a significant 46.8 percent, from 782 acres in 1969 to 416 acres by 1978.

The market value of farm products jumped at an annual rate of 19.6 percent during 1974-78, ending the period at $38.7 million. From 1969 to 1974, this growth rate was a feeble 2.6 percent. The average market value of products per farm has been consistently high, and the 1978 total of $159,369 places Lee in third place regionally.

Lee County followed the improving regional trend, with its 1982 reported crime total of 9,169 showing a decrease from the 10,924 posted in 1981. Crimes per 100,000 inhabitants exhibited the same trend, dropping from 5,084.1 in 1981 to 4,034.6 in 1982. This large 20.6-percent decrease was the region's most impressive.



COLLIER

Remote areas of Collier County are home for the endangered Florida panther, the newly designated state animal.

Formed as part of the division of Lee County in 1923, Collier County was named in honor of Barron G. Collier, a business tycoon of the early 1900s

The county had the region's highest population growth for 1980-82, a 6.8-percent annual increase. Its population increased from 85,971 in 1980 to an estimated 98,094 in 1982.

Collier's age and race statistics exhibit trends common to the entire region. During the 1970-80 period, the group age 65 and older increased its share of the population from 14.0 to 19.0 percent. At the same time, the percentage of white population also moved up from 91.3 percent in 1970 to 94.2 percent by 1980.

Following the regional and statewide trend, the allotment of housing units for seasonal and occasional use showed a significant increase from 1970 to 1980. Of the more than 17,500 units available for housing in 1970, 2,450, or 13.9 percent, were seasonal and occasional-use units. By 1980, 12,374 units were slated for seasonal and occasional use, or 24.4 percent of the 50,743 total. At the same time, average household size decreased from 2.88 in 1970 to 2.49 by 1980.

Both the manufacturing and construction industries increased their combined share of total nonagricultural employment from 16.6 percent in 1975 to 20.2 percent by 1981. Total nonagricultural jobs rose from 15,543 in 1975 to 30,944 by 1981, with construction industries representing 16.2 percent of the 1981 total.

Collier County provided $910.9 million in personal income to the region in 1980, representing a 17.1-percent yearly gain over the 1970 level of $188.4 million. In 1980, transfer payments were 13.8 percent of the total amount, up from 9.7 percent a decade earlier. Both of these percentages, however, were the lowest in the region. Earnings, during the same period, lowered its impact on personal income from 61.9 percent in 1970 to 53.4 percent in 1980.

Gross sales grew from approximately $150 million in 1970 to $978.1 million in 1980, a yearly gain of 20.6 percent. Collier was one of two counties to maintain very high rates for 1970-80 and 1980-82, with the 19.3-percent growth registered for 1980-82 leading the region. Taxable sales could not match the gross-sales performance, managing growth of only 8.2 percent for 1980-82, after a 19.8-percent increase for 1970-80.

Collier's average farm size of 1,661 acres in 1978 was the region's largest, but this average was less than half the 1969 acreage of 3,505 acres. Farms numbered 171 in 1978, up from the 86 operated in 1969, but total farm acreage fell slightly by 5.8 percent to 283,975 acres in 1978.

After holding at $17.7 million in 1969, the market value of farm products increased by 8.1 percent annually to attain a $26.1-million level in 1974. The growth rate from 1974-78 was substantially higher, a 14.7-percent growth rate pushing the market value total to $45.3 million. The average market value of products per farm has been superior to all other counties, and by 1978, stood at the impressive figure of $264,869. This level was more than $100,000 higher than any other county in the region.

Holding to the regional trend, crime in Collier ebbed from a 13.7-percent annual increase for 1972-81 to a 3.3-percent decline for 1982 over 1981. Crimes per 100,000 people followed the same pattern, rising to 6,595.7 in 1981, and subsequently dropping 10.2 percent to 5,920.9 by 1982.

FRESHWATER USE IN SOUTHWEST FLORIDA

Bob Norberg and Phil Waldron
Planners
Southwest Florida Water Management District
with assistance from the SWFWMD staff

Estimated freshwater use by county in 1980 is summarized in Table 1, which also indicates that total water use for the southwest region was 2.148 billion gallons per day. However, water use was not evenly distributed, with approximately 55 percent of total use occurring in Polk (30 percent) and Manatee (25 percent) counties. Additionally, seven counties (Collier, Highlands, Hillsborough, Lee, Manatee, Pinellas and Polk) accounted for 87 percent of the region's water use, with the remaining 13 percent allocated to the other seven counties.

This uneven distribution of freshwater use is best explained by examining the various components of water use, which ranked according to their relative share or total use in 1980, were thermoelectric power generation, irrigation, public supply, industrial supply and rural supply. Each component is examined below.

Thermoelectric power generation

Water use for thermoelectric power generation includes quantities used for condenser cooling and for generation of electrical power. This water is mostly self-supplied surface water, except for very small quantities of groundwater used for other purposes at power plants. Most of this groundwater is purchased from public-supply systems. The 487.56 million gallons of fresh water per day (MGD) used in Lee County helped produce 3,430 kilowatts of electrical power, or about seven kilowatts per gallon of fresh water used.

This category comprised about 40 percent of total water use within the region during 1981, with freshwater use totaling approximately 870 MGD within these fourteen counties, while saline water used for the same purpose totaled 6,216 MGD. More than 90 percent of the freshwater used for power generation occurred in only three counties: Lee, Polk and Highlands. By far, Lee used the most at more than 487 MGD, or 56 percent of the total freshwater use for power generation within the area. This single use of water in Lee County accounts for almost 23 percent of the region's total freshwater use in 1980, with Polk County's 295 MGD accounting for almost 17 percent of the total.

Irrigation

Estimates of water used for irrigation contained in Table 2 were based on information

Table 1.—Total freshwater withdrawn for all uses, by county, in million gallons per day, 1980

County	Public supply	Rural supply	Industrial self-supply	Irrigation	Thermo-electric power	Total
Charlotte	4.93	1.24	0.00	24.99	0.00	31.16
Citrus	0.91	5.84	0.55	4.17	0.57	12.04
Collier	19.30	2.56	2.33	86.95	0.00	111.14
De Soto	0.71	2.15	0.53	34.34	0.00	37.73
Hardee	1.27	2.58	0.79	38.91	0.00	43.55
Hernando	1.14	4.92	31.60	3.97	0.00	41.63
Highlands	4.95	6.30	0.95	87.56	78.71	178.47
Hillsborough	84.70	10.22	26.77	72.88	2.77	197.34
Lee	29.84	6.31	4.09	46.42	487.56	574.22
Manatee	20.86	5.38	0.19	65.60	3.60	95.63
Pasco	11.92	7.71	15.83	20.07	0.26	55.79
Pinellas	102.85	3.39	0.89	9.21	0.11	116.45
Polk	35.54	16.00	208.71	54.70	295.40	610.35
Sarasota	19.54	1.64	0.10	20.80	0.00	42.08
Total	338.46	76.24	293.33	570.57	868.98	2,147.58

Source: U.S. Geological Survey, Water Resources Investigation 82-4090, Source, Use, and Disposition of Water in Florida, 1980.

obtained by personal communication with local, county and state representatives of agricultural agencies, and from grove owners and farmers. Pumping time, registered at many irrigation sites, was used to determine not only the amount of water use for a particular type of crop, but also to provide a better estimate of the total water use for the same type of crops on farms within the area. The amount of water applied can then be correlated to rainfall and other factors such as sunlight, wind, cloud cover, temperature, economics and the individual farmer. Furthermore, the wide range in growing seasons within Florida will also influence the timing and irrigation rate for each crop type.

Total freshwater use for irrigation in 1980 was approximately 571 MGD, comprising roughly 27 percent of the region's water use. The vast majority of this freshwater use was from groundwater sources, and approximately 70 percent of total use occurred in the area from Manatee and Hardee counties southward.

More than 50 percent of the irrigated acreage was devoted to citrus crops, with roughly 256,000 of the 461,000 acres irrigated in this area devoted to citrus production. By far, Polk County had the largest amount of irrigated citrus acreage, accounting for more than one-third of the area's total. Highlands, DeSoto, Hardee, Hillsborough and Pasco counties all had more than 20,000 acres of irrigated citrus land.

Pasture was the next largest classification of irrigated cropland. In the region, 85,000 acres of pasture were irrigated in 1980, with Highlands County accounting for 63 percent (54,000 acres) of the total and Collier County responsible for another 12,000 acres. Irrigated pasture comprised 18 percent of agricultural acreage irrigated in southwest Florida.

Truck farming and other categories comprised 12 and 9 percent of the acreage irrigated, respectively. Truck farming includes tomatoes, peppers, cucumbers, strawberries, cantaloupe and other vegetables. Acreage harvested and replanted during the year was counted twice. The other category includes sod, lawns, parks, cemeteries, golf courses, ornamentals, peaches and fish farms.

The amount of irrigation varies greatly with rainfall, type of crop, farming practices, soil type, source and cost of water, and other fac-

Table 2.—Irrigation water use and acreage irrigated in Florida, by county and crop type, 1980

County	Fresh-water with-drawn (MGD)	Acres irrigated							
		Citrus	Melons	Truck farm	Pasture	Sugar cane and tobacco	Corn	Other	Total
Charlotte	24.99	4,000	1,500	4,050	1,600	0	300	2,139	13,589
Citrus	4.17	100	300	80	200	0	250	1,185	2,115
Collier	86.95	7,000	0	16,000	12,000	0	0	4,500	39,500
De Soto	34.34	31,000	2,000	2,640	1,500	0	4,000	1,945	43,085
Hardee	38.91	26,000	1,500	2,640	2,000	0	30	495	32,665
Hernando	3.97	1,800	200	0	200	0	50	1,260	3,510
Highlands	87.56	37,000	0	600	54,000	0	0	6,600	98,200
Hillsborough	72.88	26,000	200	11,550	1,000	0	100	5,102	43,952
Lee	46.42	5,000	0	7,500	3,000	0	0	4,800	20,300
Manatee	65.60	9,000	500	10,450	5,500	0	3,000	4,864	33,314
Pasco	20.07	20,000	400	615	500	0	0	1,240	22,755
Pinellas	9.21	500	0	0	0	0	0	3,700	4,200
Polk	54.70	87,000	500	800	1,400	0	50	4,165	93,915
Sarasota	20.80	1,200	250	1,680	2,000	0	400	4,192	9,722
Total	570.57	255,600	7,350	58,605	84,900	0	8,180	46,187	460,822

Source: Agricultural agencies, grove owners and farmers.

tors. In general, vegetables and sugarcane receive the most water and pasture the least. On the average, for all types of irrigation, 16.6 inches of water were applied during the growing seasons in 1980.

Public supply

The public-supply category includes all water distributed by large water-supply systems to households, industry, commercial establishments, agriculture and other uses. Table 3 shows the total population served and quantity of water delivered by county and use for 1980. Data have been supplied by the system operators. The amount of water distributed is not equal to the amount of water consumed, because a large portion of the water distributed is returned to the system for possible reuse and an additional quantity is lost through system leaks. In 1980, 97.21 MGD were actually consumed, compared to 338.46 MGD that were distributed.

Public-supply water delivery comprised approximately 16 percent of the region's water use. Charlotte, Hillsborough, Lee, Manatee, and Sarasota counties received some of their water from surfacewater sources; however, in the remaining counties, water is supplied from groundwater sources. Roughly 29 percent of the public-supply water delivery was obtained from surfacewater sources.

As expected, the greatest percentage of public-supply water use occurs in counties with the greatest population. In southwest Florida, the population growth has occurred largely in counties along the coast, particularly in Pinellas, the state's most densely populated county. Almost 31 percent of the population served by the region's public-supply systems is located in Pinellas County, which also accounts for 30 percent of the public-supply water delivery. Hillsborough County comprised another 25 percent of this category. In total, Hillsborough, Manatee, Pasco, Pinellas and Sarasota counties receive 71 percent of the area's public-supply water delivery. Polk County accounts for another 10 percent.

Household use comprised the largest share of publicly supplied water, with 259.39 MGD (77 percent) delivered to residential units within the area in 1980. Another 15 percent was delivered to commercial establishments. Industrial, agricultural and other (mostly air-conditioning uses) deliveries comprised 8 percent. Surprisingly, Pinellas County's 9.59 MGD was the largest agricultural water use from public-supply deliveries. This statistic may be explained by the inclusion of golf

Table 3.—Public-supply water use in southwest Florida, by county, 1980

County	Population served (1,000)	Water delivered by uses (MGD)					
		House-hold	Agricul-ture	Industry	Commercial	Other	Total
Charlotte	51.4	4.15	0.00	0.00	0.78	0.00	4.93
Citrus	7.4	0.78	0.00	0.00	0.13	0.00	0.91
Collier	71.4	16.94	0.00	0.74	1.62	0.00	19.30
De Soto	7.0	0.64	0.00	0.00	0.07	0.00	0.71
Hardee	7.5	1.21	0.00	0.00	0.06	0.00	1.27
Hernando	6.6	0.68	0.00	0.00	0.46	0.00	1.44
Highlands	25.9	3.18	0.14	0.17	1.46	0.00	4.95
Hillsborough	587.8	63.75	0.00	7.02	13.93	0.00	84.70
Lee	166.4	27.67	0.20	0.30	1.57	0.10	29.84
Manatee	124.3	17.73	0.00	1.04	2.09	0.00	20.86
Pasco	136.7	11.08	0.05	0.09	0.70	0.00	11.92
Pinellas	701.2	68.55	9.59	4.45	20.26	0.00	102.85
Polk	183.5	26.21	0.14	4.68	4.41	0.10	35.54
Sarasota	191.5	16.82	0.00	0.52	2.20	0.00	19.54
Total	2,268.6	259.39	10.12	19.01	49.74	0.20	338.46

Source: System operators.

courses in the agricultural category and the almost-total absence of individual wells for agricultural uses in Pinellas County.

Industrial self-supplied

Water use for industrial purposes in 1980 comprised roughly 13.6 percent of the region's total freshwater use. The major industrial uses in the area are for phosphate and limerock mining, chemical processing, citrus processing and air-conditioning. By far, the region's largest uses were for phosphate and limerock mining. Chemical processing occurs largely in Hillsborough County, and usually involves the processing of phosphate products and by-products.

Polk County was the area's largest user of industrial self-supplied water, with approximately 209 MGD used in 1980. Almost 62 percent (129 MGD) of this figure was used for phosphate mining and 31 percent (62 MGD) for chemical processing. Phosphate mining in Polk County comprised 44 percent of the region's total industrial self-supplied water use. Additionally, this single use of water in Polk County is responsible for 6 percent of the area's total freshwater use.

Limerock mining is a major industrial user of freshwater in Hernando County, with more than 31 MGD used for this activity. In Pasco County, 15 MGD were used for citrus processing. Hernando, Hillsborough, Pasco and Polk counties accounted for 96 percent of industrial self-supplied water use within the area. Manatee, De Soto and Hardee are expected to increase their use of water for industrial purposes as the phosphate industry shifts southward into these counties.

Rural

The rural water-use component includes all water used by households that are not supplied by public supply systems, and also includes households served by their own wells and by small, public systems not included in the public-supply component. Also included in this category is water used for livestock purposes.

Of the five water-use components, the rural category accounted for the smallest usage in 1980, with only 76.24 MGD allocated to rural use in southwest Florida. The rural, domestic use was computed by multiplying the total number of people in the county not served by a public-supply system, by a per-capita-use amount that was estimated from nearby areas where records were kept. Water use for livestock was estimated on a fixed amount of use per head for each kind of animal.

Combined, Hillsborough and Polk counties accounted for 34 percent of the area's total rural use, largely due to dairy farming in Hillsborough County and the self-supplied rural population in Polk County. In fact, 138,100 people were classified as rural self-supplied in Polk County in 1980, compared to 183,500 on public-supply systems. Additionally, Citrus County shows 47,300 people self-supplied, with only 7,400 people served by large public systems. For the entire region, 508,400 people were classified as rural self-supplied in 1980, or approximately one-fifth of the area's entire population.

Source of water for public supply in southwest Florida, 1980

The hydrogeology of southwest Florida consists of 1) a surficial aquifer comprised of undifferentiated sands; 2) an upper confining bed for the Floridan Aquifer composed of impermeable limestone, sand and clay; 3) the Floridan Aquifer, a productive water-storage zone consisting of permeable limestone; and 4) a lower confining bed of impermeable anhydrite or gypsum.

The Floridan Aquifer ranges in depth from sea level in the northern counties to nearly 700 feet below sea level in the southern counties. This aquifer contains generally good-quality water from the Tampa Bay area northward. In the southern portion, it contains mostly nonpotable water and must be treated by Reverse-Osmosis (RO) or other desalination processes.

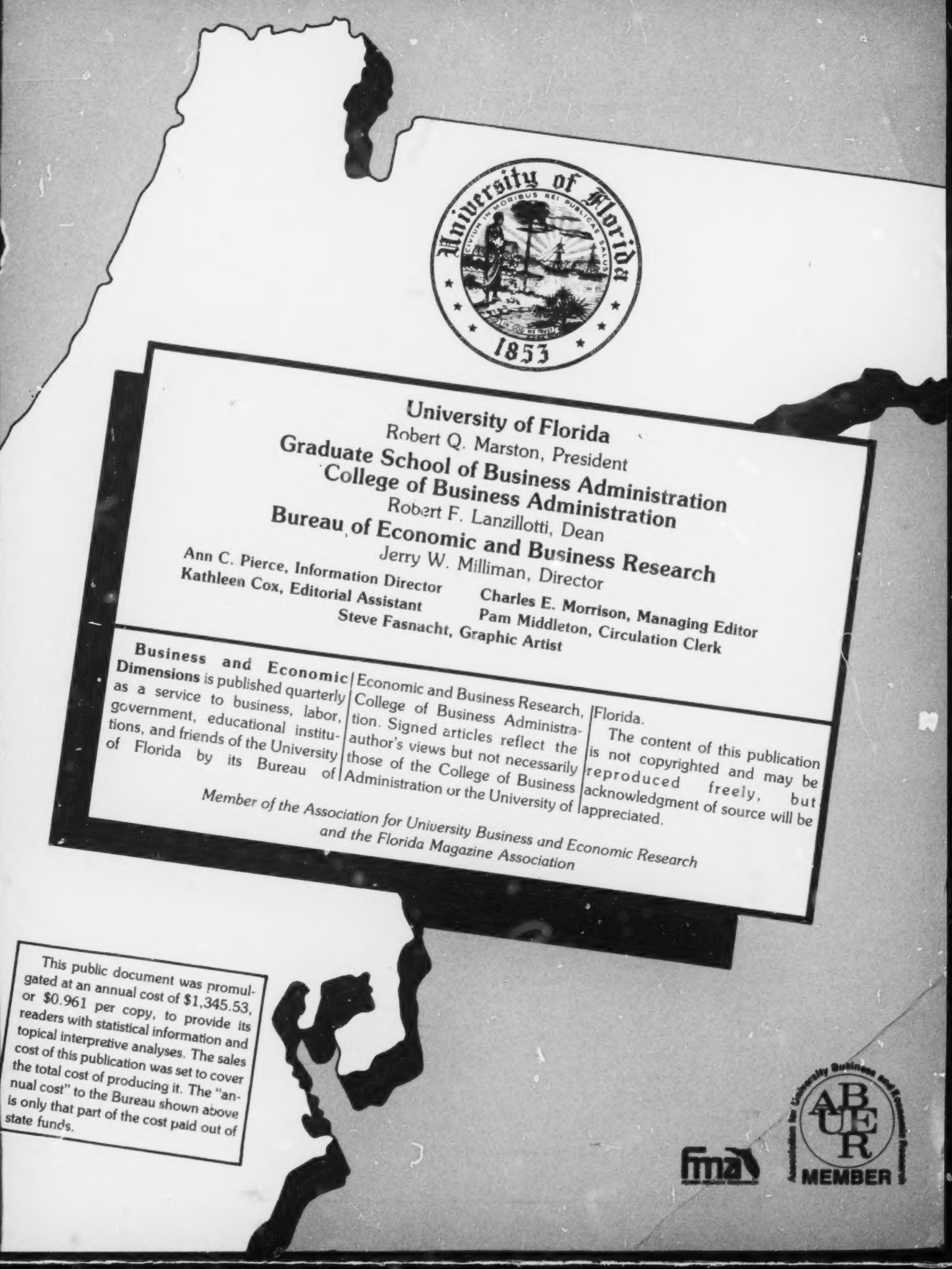
Groundwater sources provide approximately 80 percent of the water used within the region. The water-table aquifer (surficial aquifer) is used to supply water for low-volume withdrawals, and is not widely used except along the central ridge area where the sands are thicker than normal. It is also used in the southern portion where deeper aquifers are distinctly mineralized. However, the Floridan Aquifer is very productive in the northern part of the region, and is among the more productive aquifers in the nation.

Recharge to the Floridan Aquifer occurs as rainfall, which comes primarily from June through September, while the remainder of the year is relatively dry. Groundwater in the aquifer travels generally from the center of the state and discharges near the coastlines from springs or direct flow to the Gulf of Mexico. Freshwater flowing toward the coast interacts with salt water, forming a zone of transition. During the dry season, there is the potential for a slight landward movement of the transition zone, while the movement is in the opposite direction during the wet season. Overdevelopment of the water resource in the coastal areas, caused by pumping water from the aquifer in excess of recharge rates, induces inland migration of salt water.

Areas such as Pinellas County experienced saltwater-intrusion problems early-on in its development. As a result, the large water suppliers in Pinellas were forced to purchase property outside the county and further inland for developing groundwater supplies to meet the needs of the rapidly expanding population. Soon to follow Pinellas County's experience were Hillsborough, Pasco, Hernando and Citrus counties. The southern counties have experienced groundwater quality problems of a different nature. However, the solution to their problem is essentially the same, which is to develop water from inland sources or from surfacewater sources.

In 1974, the West Coast Regional Water Supply Authority (WCRWSA) was formed and authorized to supply water for county and municipal purposes in the Tampa Bay area. This new public body represents Pinellas, Pasco and Hillsborough counties, as well as the cities of Tampa and St. Petersburg, and continues to develop regional well fields for water-supply needs. The WCRWSA has been highly successful in its short life span, and has brought some order to the freshwater allocation problem.

Two other regional water-supply authorities have been created since the establishment of the WCRWSA. The Withlacoochee Regional Water Supply Authority was created in 1977, and consists of Citrus, Hernando, Marion and Sumter counties. In 1982, the Peace River Regional Water Supply Authority was created and, at the present time, consists of Charlotte, De Soto, Manatee and Sarasota counties. So far, these two authorities have had little impact on the water supply.



1853

University of Florida
Robert Q. Marston, President
Graduate School of Business Administration
College of Business Administration
Robert F. Lanzillotti, Dean
Bureau of Economic and Business Research
Jerry W. Milliman, Director
Ann C. Pierce, Information Director
Kathleen Cox, Editorial Assistant
Charles E. Morrison, Managing Editor
Pam Middleton, Circulation Clerk
Steve Fasnacht, Graphic Artist

Business and Economic Dimensions is published quarterly as a service to business, labor, government, educational institutions, and friends of the University of Florida by its Bureau of Economic and Business Research, College of Business Administration. Signed articles reflect the author's views but not necessarily those of the College of Business Administration or the University of Florida.

The content of this publication is not copyrighted and may be reproduced freely, but acknowledgment of source will be appreciated.

Member of the Association for University Business and Economic Research and the Florida Magazine Association

This public document was promulgated at an annual cost of $1,345.53, or $0.961 per copy, to provide its readers with statistical information and topical interpretive analyses. The sales cost of this publication was set to cover the total cost of producing it. The "annual cost" to the Bureau shown above is only that part of the cost paid out of state funds.

fma

ABUER MEMBER